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July 2008

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YOUR TECHNOLOGY NAVIGATOR

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Inside NVIDIA's New GTX 200 Architecture

The Best Freeware Tools Ever Made!

Become A Polyglot Online. Free!

India's Energy Savers

BEHIND THE GAMES

An exclusive look at *Gears Of War 2* with its creator, Cliffy B

Editorial

On IT and related matters

I remember reading a Nicholas Carr article 'IT Doesn't Matter' back in 2003, where he said IT is commoditized and cannot provide a competitive advantage. Now, even Carr is changing his tune. I say he is about half right.

But will IT alone help? I don't think so. IT alone can no longer provide a competitive advantage unless it is combined with smart people and business processes. The giant companies of the world have proven that IT is a key ingredient of the winning business success recipe.

What's the recipe of a winning business? Individual improvements and innovation is not sustainable; over time it will be copied. The key is to keep improving and innovating, better and faster, and then no one can catch up.

How many enterprises look at their businesses this way? Take a look at the stock exchange. The Sensex is now on a roller-coaster ride. Now, having said that, are we equipped to handle such large volumes of transactions? Remember Tokyo Stock Exchange? It just came down, couldn't scale up to handle large volumes of online trading. Are we equipped to scale up?

On the other hand, the BPO industry is doing well, what with companies doing an impressive job of keeping their cost edge, thanks to the improvement in management and technology. The sector is one of the fastest adopters of technology to keep a competitive edge. However, customers of these companies, the foreign companies, are demanding more and more for less. They want more sophisticated work and the quality metrics among domestic companies are not constant. Can these companies hone their competitive edge before the foreigners find a better alternative to India?

When a top official of the government of Punjab said Chandigarh was going to be the next IT hub of India, I was thinking of all the so-called 'IT hubs' in India. There seems to be competition between the states of India to create a 'Bangalore' in every corner of India.

The surprising fact is that it's working. It was pleasant to see the IT parks in Punjab; similar parks are being built across the nation. This reminds me of the way there is a shopping mall in every corner of all major cities in India. We seem to overdo certain things in all aspects and forget to do our homework well. Is this going to be the case with the IT parks also? Are these technology 'giants' compromising on the quality of service to create such a multi-locational presence in India? We'll have to wait and watch how long this goes on.



Sujay Nair Editorial Director

The survival of business is all about being different and using technology to create a competitive edge.

The survival of business is all about being different and using technology to create a competitive edge. This will set you apart. How is this possible in such a dynamic market? Does technology alone provide this 'edge'? Or, is it a combination of various factors aligned with technology that provides it? Some of the key factors are innovation and thinking out-of-the-box.

Keep asking this question—is IT keeping up with my own innovative ideas? The new question today is not 'does IT matter?' but 'can IT provide a base for my innovative ideas in business?'



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Each month, *Digit* walks through the technology maze to bring you the most relevant, most researched stories. If you have an opinion about anything published in *Digit*, or about technology in general, please write in to **editor@thinkdigit.com**

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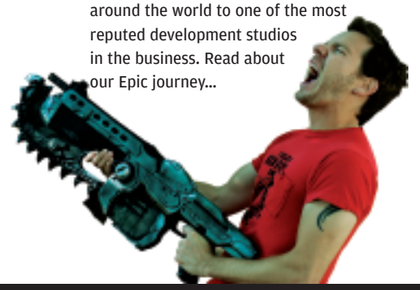


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Behind The Games
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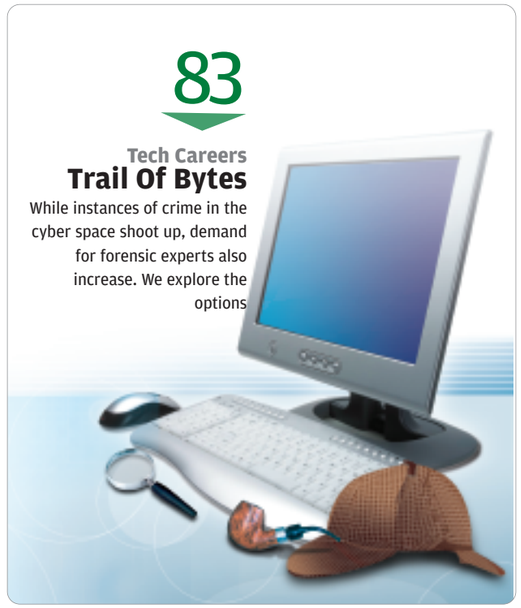
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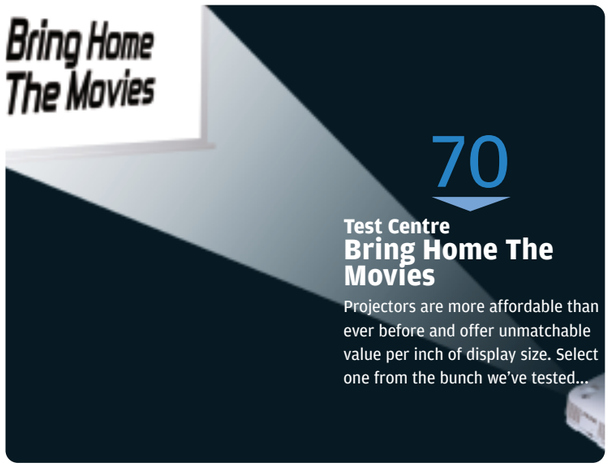
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Gaming

FREE

Counter-Strike 2D 0.1.0.4

Counter-Strike 2D is a freeware clone of the well known game Counter-Strike. Experience the most famous multiplayer game ever in a top-down 2D perspective.

PCSX2

PCSX2 is a PlayStation 2 emulator for Windows and Linux. The PCSX2 project attempts to allow PS2 code to be executed on your computer, thus meaning you can put a PS2 DVD or CD into your computers drive, and boot it up!

Soldat

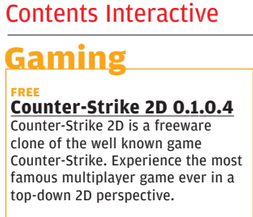
Soldat is a unique side-view multiplayer action game. It takes the best from games like Liero, Worms, Quake and Counter-Strike and gives you fast action gameplay with tons of blood and flesh.

Warsow

Warsow is a free standalone first person shooter game for Windows and Linux. It is based on the Qfusion 3D engine (a modification of the Quake 2 GPL engine), and aimed on the competitive scene, or the e-sports community. Warsow is developped under the motto "by gamers for gamers" by a team coming from all kinds of gaming backgrounds.

DEMOS

Devil May Cry 4



In Devil May Cry 4 Capcom's gunslinging demon hunter Dante is back, but this fourth chapter will introduce a new hero, Nero, who possesses a demonic arm that can pull in enemies or use them as projectiles. This demo allows you to play ten minutes of Devil May Cry 4 gameplay along with a boss battle.

SimCity Societies

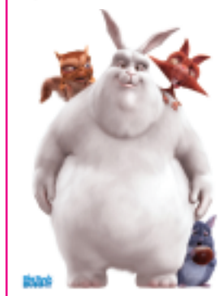
From futuristic metropolises and fantastical haunted cities to obedient authoritarian states and devout contemplative towns—what kind of city to create is up to you. Choose between creative modes or strategic modes that will challenge you to keep your citizens content and your budget balanced. With this accessible, innovative and versatile city-builder, you can choose from more than 500 buildings to create the city of your dreams.



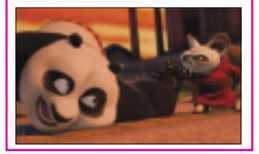
Entertainment

HD

Big Buck Bunny



Kung Fu Panda



Productivity

Fedora 9 DVD

Fedora is a Linux-based operating system that provides users with access to the latest free and open source software, in a stable, secure and easy to manage form. We strongly believe in the bedrock principles that created all the components of our operating system, and because of this we guarantee that Fedora will always be free for anybody, anywhere, to use, modify and distribute.

PERSONAL

eHour 0.8.2

eHour application was designed to be a Web-based time tracking tool for consultancy companies and other project based businesses.

Microsoft WorldWide Telescope

The WorldWide Telescope (WWT) is a Web 2.0 visualisation software environment that enables your computer to function as a virtual telescope—bringing together imagery from the best ground and space-based telescopes in the world.

Expressivo 1.4.1

Expressivo is a utility that lets you listen to documents, e-mails or Web pages. What's great is that it allows you to convert text to MP3 files for listening later with your portable MP3 player.

Nero Linux 3.5.1.0

Based on the award-winning current Nero Burning ROM platform, Nero Linux 3 is the most powerful and versatile burning application available for Linux, and the only application to offer Blu-ray Disc and HD DVD data burning support.

SuperCat 4.4

SuperCat lets you catalog all your disks, so you'll never lose a file again. SuperCat 4.4 is both easy to use for novice users, and has powerful features required by professional users like network administrators.

TOWeb 2.6.0.523

TOWeb is an easy-to-use software for persons and organizations wishing to quickly create a Blog or a Web Site without any Web designing skills, without dealing with Web programming stuff, without using a retouching software for their pictures and without being left alone in front of a blank page with dozens of options.

DEVELOPERS

Adobe AIR SDK

The Adobe AIR SDK provides the tools you need to package and deploy Adobe AIR applications, if you prefer working with a text editor or another development environment.

Microsoft MSDN Library

MSDN Library provides access to essential programming information, including technical reference documentations, white papers, software development kits and code samples necessary to develop Web services and applications. This is an updated version of the MSDN Library for Visual Studio 2008 Beta 2.

Microsoft Virtual PC 2007 SP1 x64

Virtual PC 2007 is a powerful software virtualization solution that allows you to run multiple PC-based operating systems simultaneously on one workstation, providing a safety net to maintain compatibility with legacy applications while you migrate to a new operating system. It also saves reconfiguration time.

Microsoft XNA Game Studio 3.0 CTP

This is the first Community Technical Preview (CTP) of XNA Game Studio 3.0, giving you the ability to build games for the entire family of Zune media devices. This feature gives you access to the majority of the XNA framework APIs while retaining a seamless sense of integration with the Zune media experience.

OpenSwing 1.6.4

OpenSwing is an open-source suite of advanced graphics components based on Swing toolkit—these components are more sophisticated of those provided with Swing and can be manipulated directly inside the UI designer of the IDE. OpenSwing is also a framework that provides data binding mechanism between components and data model, based on the MVC paradigm. Data model is based on Java Beans (POJOs) and it is supported in all OpenSwing components, for example components container or Grid control.

3DPaintBrush

3DPaintBrush is an exciting 3D software that provides you with amazing near photo-realistic rendering quality images and animated movies starting from your 3D models, in real time.

Visual Paradigm Suite 3.3

Visual Paradigm offers an award-winning line of standards-based visual modeling platforms that are easy-to-use, powerful and yet selling at an unbeatable price. Go to www.visual-paradigm.com to get your license keys.

DRIVERS

ATI Catalyst 8.5

AMD's ATI Catalyst graphics and HD video configuration software delivers unprecedented control of performance and visual quality with ATI Radeon graphics processors.

DirectX 9.0c June 2008 Redistributable

Microsoft DirectX® End-User Runtime provides updates to 9.0c and previous versions of DirectX.

NVIDIA Forceware 175.16 for Windows XP

ForceWare software for NVIDIA GeForce graphics processing units (GPUs) provides you with the best combination of performance, quality, and features

Realtek HD Audio Codec 1.95

Audio Codec package for Realtek's HD Audio.

For any queries regarding the CD or DVD, e-mail **help@thinkdigit.com** with "CD/DVD" as the subject.
If the subject is not mentioned, your mail might not reach the right person.

Regulars

ESSENTIALS

.net Framework 2.0

You'll need the .net Framework to run many .net-based applications, including the Digit Software Archive

µTorrent 1.7.7

µTorrent is an efficient and feature rich BitTorrent client for Windows sporting a very small footprint. It was designed to use as little cpu, memory and space as possible while offering all the functionality expected from advanced clients.

Avast Home Edition 4.8

Avast Home Edition is a Free, complete ICSA certified antivirus software for home (non-commercial) use. You need to obtain a registration key by visiting www.avast.com.

Comodo Firewall Pro 3.0.25.378

Comodo Firewall constantly monitors and defends your PC from internet attacks.

Foxit Reader 2.3

Foxit Reader 2.3 is a free PDF document viewer and printer, with incredible small size, breezing-fast launch speed and amazingly rich feature set.

Free Download Manager 2.5 build 758

Free Download Manager (FDM) is a full-featured download accelerator and manager.

Irfan View 4.10

IrfanView is a fast and simple image viewer and editor that supports all major graphic formats.

Java(TM) 2 Runtime

You'll need the Java runtime to run applications based on Java

K-Lite Mega Codec Pack 3.9.5

With the K-Lite Codec Pack you should be able to play all the popular movie formats and even some rare formats. This package is mainly for power users and people who do their own encodings..

Opera 9.50

The new Opera 9 has BitTorrent, Improved rich text editing, Site preferences, allows you to add your favorite search engines, content blocker, thumbnail preview, Widgets, and also the old useful features like pop-up blocking, tabbed browsing, integrated searches, and more
.



Silverlight

Silverlight is a cross-browser, cross-platform plug-in for delivering the next generation of media experiences

Spybot Search and Destroy 1.52

Spybot - Search & Destroy can detect and remove a multitude of adware files and modules from your computer.

VLC Player 0.8.6h

VLC (initially VideoLAN Client) is a highly portable multimedia player for various audio and video formats (MPEG-1, MPEG-2, MPEG-4, DivX, mp3, ogg, ...) as well as DVDs, VCDs, and various streaming protocols. It can also be used as a server to stream in unicast or multicast in IPv4 or IPv6 on a high-bandwidth network.

WinRAR 3.71

WinRAR is a 32-bit Windows version of RAR Archiver, an archiver and archive manager. RAR files can usually compress content by 8 percent to 15 percent more than ZIP files.

UPDATES AND ADD-ONS

Avast Update

This Avast update will update your Avast antivirus signatures

AVG 8.0 Updates

The latest updates for AVG AntiVirus

Digit Software Archive 2006 Beta

This is a Beta version of Digit Software Archive. It provides you a convenient search tool to locate the software you are searching for in the of Digit's CD DVD, starting July 2005. Note: This version of Archive requires you to have .NET framework 2.0 installed. Uninstall the previous version of Digit Archive if installed before October 2006 before installing this version.

Irfan View 4.10 Plugins

All the IrfanView plugins you'll ever need

McAfee Virus Definition Updates

The latest updates for McAfee AntiVirus

Norton AntiVirus Virus Definitions Update

Contains the latest free virus databases for Norton AntiVirus Virus (NAV)

Spybot S&D Updates

This updates the detection rules.

Kaspersky Internet Security 7.0 Update

The latest updates for Kaspersky Internet Security 7.0

Tools

MULTIMEDIA

AIMP 2.11

AIMP is a free audio player which supports a variety of audio formats.

Blender 2.46 for Linux

Blender is the free open source 3D content creation suite.

Daniusoft DVD Video Converter Pack 1.4.0.0

Daniusoft DVD Video Converter Pack is the ultimate converter suite which consists of 4 useful products: Video Converter, DVD Ripper, Audio Converter and DVD Copy

- foobar2000 0.9.5.3
- Handbrake 0.9.2 for Linux
- YafRay 0.0.9
- Fraps 2.9.4

INTERNET

- Firefox 3 Release Candidate 3 for Linux
- Firefox 3 for Windows
- HLSW 1.2.1
- K-Meleon 1.1.5
- Miranda 0.7.7
- Pidgin 2.4.2
- NetDrive 1.0.0.28

Gtalk Labs Edition

Features of the Google Talk Gadget on your desktop (emoticons, group chat, and more!).

SYSTEM

- Ad-Aware 2008 7.1.0.8
- Adobe AIR
- a-squared Free 3.5
- Avira AntiVir Personal
- Microsoft Baseline Security Analyzer 2.1
- Microsoft Malicious Software Removal Tool
- Microsoft Zune 2.5 x64
- Microsoft Zune 2.5 x86
- RocketDock 1.3.5
- SUPERAntiSpyware Free Edition
- ThreatFire

Gridmove 1.19.42

GridMove is a program that aims at making windows management easier.

JetAudio Basic 7.1.1.3101

JetAudio is integrated multimedia software made up of a single compact rack. Not only does it play various music and video files, it also has features such as CD burning, recording, and conversion to other file formats.

MagicDisc Virtual CD/DVD-ROM

MagicDisc is freeware. It is very helpful utility designed for creating and managing virtual CD drives and CD/DVD discs.

Microsoft Pro Photo Tools

Microsoft Pro Photo Tools provides a set of photography tools for photographers such as to view, add, change, edit and delete common metadata properties for digital photos or pictures, and captures RAW images.

DivX Converter

Convert nearly any video to a DivX® video by simply dragging and dropping it onto the DivX Converter. To convert MPG, VOB, TS and SVCD files to DivX with DivX Converter, add the optional MPEG-2/DVD Plug-in for $9.99.

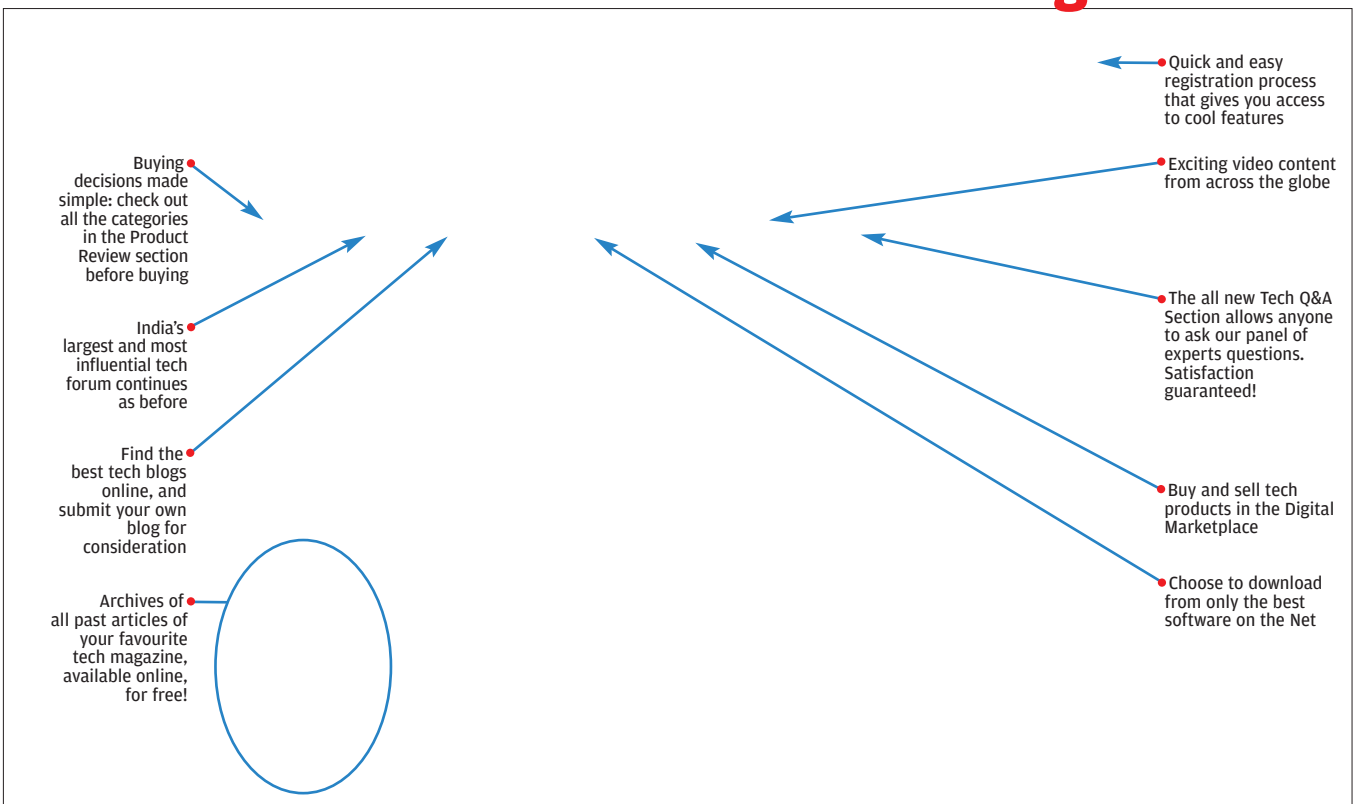
Spyware Doctor 5.5 for Windows

Spyware Doctor is a top-rated malware & spyware removal utility that detects, removes and protects your PC from thousands of potential spyware, adware, trojans, keyloggers, spybots and tracking threats. Protect your privacy and computing habits from prying eyes and virtual trespassers with the help of Spyware Doctor.

WindowBlinds 6.1 build 55

Customize the look and feel of Windows XP and Windows Vista with WindowBlinds. WindowBlinds can 'skin' your title bars, push buttons, Start bar, radio buttons, and nearly every other part of Windows. There are thousands of freely available skins to choose from. Use WindowBlinds to make Windows look like another operating system (Mac, Linux) or give it your own unique look and feel.

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FEATURED TUTORIAL FROM THE DIGIT FORUM (www.thinkdigit.com/forum)



HOW TO: Get old Kirsch forum theme back!

18-05-2008, 11:01 PM

amitava82
Alpha Geek



Join Date: Jul 2004
Location: Rolling Meadows, IL, US
Posts: 794

I've already posted my tutorials here. But as per request I'm creating a new thread so that its easy for new visitors to find what they are looking for.
This script will get get rid of all new weird theme and bring back good old Kirsch theme. It also removes all the ads and Think digit header. This is how it looks:
New theme: Webber. For Opera
IRC ppl gets special Evo theme..

Tutorial for Firefox:

1. Get stylish extension form here
2. Get the stylish script form here. Click the button that says "load into Stylish". A window will pop up. Click save.
3. Now reload the browser

Update: I'll update the script time to time. In order to update your script do following:
Go to manage styles (right click stylish icon at bottom) > Find updates and update all. Thats it!

Without Stylish Extension:

1. Get the stylish script form here. Click "Show code", copy and paste the code into a text editor and name it some_file_name.css.
2. Save this file to your firefox profile > Chrome directory.

For windows its stored in \Documents and Settings\user_name\Application Data\Mozilla\Firefox\Profiles\xxxx.default\chrome.
Vista: C:\Users\username\AppData\Roaming\Mozilla
For Linux, its /home/<user>/.mozilla/firefox/xxx.default/chrome

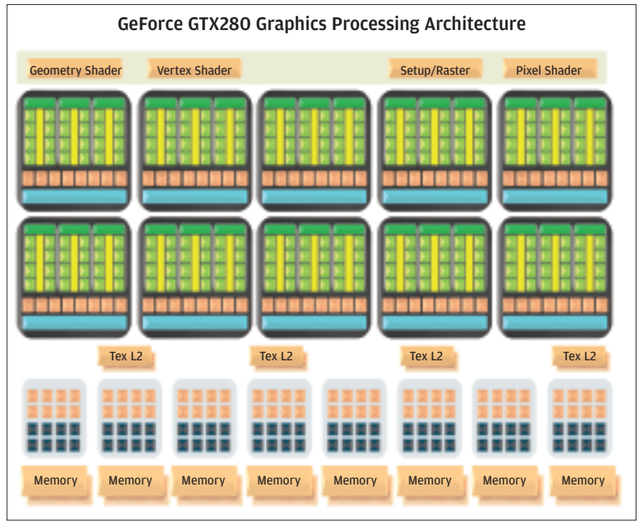
3. In the chrome directory, create a file named userContent.css. Edit the file and add the following:

@import url("some_file_name.css");
Here some_file_name.css is the css file you have saved before. Save it, restart Firefox.

For more visit:
http://www.thinkdigit.com/forum/showthread.php?t=88205

ness that made the G80 core so popular. But it's stronger and faster. Before we delve deeper into its anatomy, it's interesting to note that the way the core has been designed, it can fulfill dual roles. The GTX 200, by way of its massively parallel transistors can either work in a graphics mode, wherein it acts as in the traditional programmable GPU sense; additionally, it can double up duty in a "compute" mode in which some parts pertaining to graphics processing are turned off in favour and the chip acts as a non-traditional general processor—capable of churning through massively parallel tasks and floating-point calculations such as those needed to simulate high-level physics interactions. This is where the Beyond Gaming / Gaming Beyond roles arise from.

Internally, the core of this processor is all about threads. The core itself is mostly comprised of ten clusters called Thread Processing Clusters or TPC. Each of this cluster is in turn made up of clusters of transistors called the Streaming Multiprocessors (SM): there are three SMs in each TPC, for a total of 30 SMs in each GTX 200 core. Each SM is further comprised of many Streaming Processors or SPs. There are eight SPs in each SM, making for a total of 240 streaming processors for the entire chip. In comparison, the GeForce 8 and 9 series of cards had a total of 128 streaming processors—this is just one of the examples demonstrating how the GTX 200 is a souped up version of the older G92/80 core.



The GeForce GTX 280 GPU's graphic processing architecture: from top to bottom we have the shader and setup units, the TPC, ten in total each of which is made up of three SM which are in turn made up of 24 Stream Processors each for a total of 24x10 = 240 Stream Processors. Below the TPCs in blue, we have the eight ROP units

This structure of 240 streaming processors is where this chip from NVIDIA gets most of its parallel processing strength. As we mentioned earlier, the chip uses two different processing models. For execution across the TPCs, the architecture is MIMD (multiple instruction, multiple data). For execution across each SM, the architecture is SIMT (single instruction, multiple thread). SIMD machines such as a traditional CPU operate at a reduced capacity if the input is smaller than the MIMD or SIMD width. SIMT ensures the processing cores are fully utilised at all times.

For each SM, the chip can handle up to 32 groups of 32 threads, for a total of 1,024 threads per SM. Since the chip has 30 SMs, it can in total handle up to 30,720 threads in hardware. Comparing this with the 12,288 maximum concurrent threads that a GeForce 8800 GTX, should give you an indication of the thread processing capability of the current design versus the older generation.

The GTX 200 breaks everything down into threads and then leverages its inherent capabilities to crunch them in parallel. The chip's design lends itself to complex integer and floating-point math, memory operations, and logic operations. Each core being a hardware-multithreaded processor with multiple pipeline stages that execute an instruction for each thread every clock. Threads can be of various types which help the chip with both graphic and traditional CPU tasks including pixel, vertex, geometry, and compute threads. Programmatically, thus, every instruction is executed as a series of threads. From the programmer's perspective, SIMT allows each thread to take on its own path. Since branching is handled by the hardware, there is no need to manually manage it within the vector width.

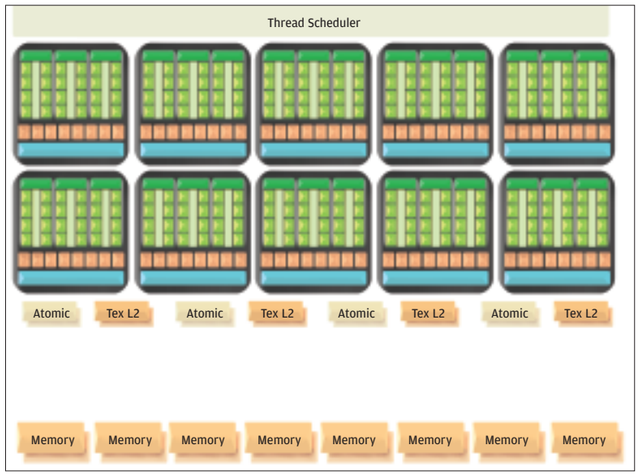
According to NVIDIA, "GPU processing is centered on computation and throughput, where CPUs focus heavily on reducing latency and keeping their pipelines busy". All GeForce GTX 200 GPUs include a substantial portion of die area dedicated to processing, unlike CPUs where a majority of die area is dedicated to onboard cache memory. Rough estimates show 20 per cent of the transistors of a CPU are dedicated to computation, compared to 80 per cent of GPU transistors.

With a thread-driven architecture, keeping the transistors fed with data becomes very important. While in CPU latency is reduced by using onboard cache memory (which comprises a significant percentage of a CPU die-estate), the GTX 200 GPU dedicates its die area to computing and thread scheduling units. Hardware thread scheduling ensures all processing cores attain nearly 100 per cent utilisation. The GPU keeps itself fed and latency down by shuffling threads across its TPCs—if a particular thread is waiting for a memory access, the GPU can perform zero-cost hardware-based context switching and immediately switch to another thread to process.

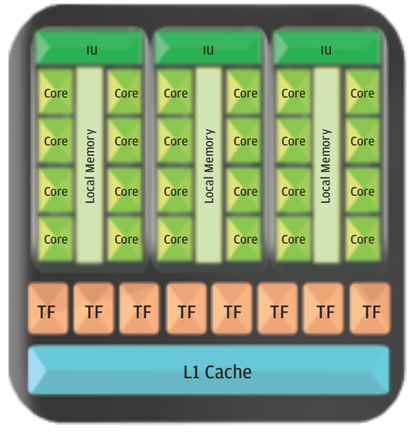
The TPCs are not the only transistors helping with the graphics processing. We can consider the TPC structures to be a common tool that the chip employs for both compute and graphic tasks. Graphics processing though also brings in the power of some dedicated processing units such as the Raster Operations Processors, or ROPs. The ROPs can be considered as a painter's workshop—it is where all the vertices which are transformed and computed in the TPCs come to be filled with colours and rendered to give the pixels which will then be used to create the final image. This final scene is assembled based on color and position data generated for each pixel. Anti-aliasing and blending are done into the framebuffer (where the final image is drawn) inside these ROPs.

The chip has eight ROPs in total versus the prior generation's six ROP partitions. The G80 core could output 24 pixels per clock and blend 12 pixels per clock; the GTX 200 chip is capable of an output and blend of 32 pixels per clock.

While not performing graphics tasks, the ROP structures are not leveraged for compute calculations. In this mode, a thread scheduler manages the threads. Texture caches are also used to combine memory accesses for greater efficiency to the read/write operations. Furthermore a small cache of memory is located within each of the SMs. This local memory is used to share data between the eight SP which constitute each SM without the need to call data from an external memory subsystem. This goes further to increase computational efficiency.



While in compute mode, the chip makes use of the local shared memory –the purple coloured lines inside each SM. The ROPs are not used in this mode



A closer look at a Thread Processing Cluster. The light green Cores are the Stream Processors, eight of which comprise a Streaming Multiprocessor

Other Structural Changes

An important change to the internals is double-precision, 64-bit floating point computation support. This addition to the architecture will benefit mathematically intensive applications such as those in high-end scientific, engineering, and financial fields. Each SM incorporates a double-precision 64-bit floating math unit, for a total of 30 double-precision 64-bit processing cores. Each of these double-precision unit performs a fused Multiply-Add operation that fully IEEE 754R floating-point specification compliant. The overall double-precision performance of all 10 TPCs of a GeForce GTX 200 GPU is roughly equivalent to an eight-core Xeon CPU, yielding up to 90 gigaflops.

This new chip also adds to the framebuffer—this is the video memory of a graphic card. While SLI implementation of previous generation chips have memory up to 1GB, the gigabyte is shared across the chips which comprise the multi-core setup in an SLI mode—practically thus, memory available to each core is around 512MB. The GTX 200 chip however, makes full use of a 1GB framebuffer. This is of huge benefit to current and future games, especially since the variety of textures used by modern games is only increasing. For example normal maps are used to enhance surface realism, cubemaps for reflections, and high-resolution perspective shadow maps for soft shadows. This means much more memory is needed to render a single scene than classic rendering which relied mainly on the base texture. Apart from this modern engines make use of advanced techniques such as deferred rendering which is also benefited by the addition to the framebuffer's size. Deferred rendering in particular consumes an immense amount of video memory and memory bandwidth, especially when used in conjunction with antialiasing. In addition to the increase in memory, the path to the memory has also increase inside the GTX 200 chips. In these new chips the memory interface width is expanded to 512 bits, up from 384 bits in previous-generation GPUs. This has been achieved using eight 64-bit-wide frame buffer interface units. This increase in the interface width has meant a greater memory bandwidth.

Brains To The Muscle

With its 65nm fabrication and a 1.4 billion transistor count, the GTX 200 is expected to run hot. Indeed, the TDP of the chip can get as high as

236 Watts! However, NVIDIA has taken a holistic approach to power management and the actual thermal profile of the chip will vary greatly depending what it will be used for.

Broadly, the chip operates under four different thermal envelopes:

- Idle/2D power mode (approx 25 W)
- Blu-ray DVD playback mode (approx 35 W)
- Full 3D performance mode (up to 236 W)
- HybridPower mode (effectively 0 W)

The HybridPower mode is enabled when a GeForce card is used in conjunction with special nForce motherboards: in this case, the onboard graphics chipset is used for 2D tasks and the dedicated graphics card is effectively switched off.

While HybridPower might be considered a feature outside of the GTX200—the chip itself has several tricks up it sleeve to reduce power draw. For one, when running 3D applications, the driver can seamlessly switch between power modes based on GPU utilisation. These new chips come with activity monitors which act as watchdogs over the traffic inside the GPU. Based on the activity reported, the GPU driver can dynamically throttle the performance mode by making changes to the clock speed and the voltage level—all transparent to the user. This behind-the-scene speed throttling goes a long way to supplying just the needed juice to the GPU and keeping the temperature and the power draw down. Apart from this throttling, the GPU also has clock-gating circuitry, which effectively shuts down blocks of the GPU which are not being used at a particular time, further reducing power during periods of non-peak GPU utilisation.



Features of future games such as Far Cry 2 will demand an increase in the number and size of textures. The GTX 200 chip can support up to 1 GB video card memory

Compute This

NVIDIA wants to take its GPU outside the graphics processing threshold. It has already taken steps to that end—the largest being the introduction of its C-like CUDA interface for programmers. Where NVIDIA would like to see its GPU (and ATI too, as a matter of fact) is more general computing. To this end some programs have already been showcased—traditional tasks which are either accelerated greatly or completely executed on the GPU. Adobe, for example, showcased a version of its Photoshop application which was GPU-accelerated and was capable of quickly loading and editing a 442MP file, at 2GB size. The edits done were rudimentary—zooming in and out, rotation and so on. But as a taste of things to come it was an impressive display, given how slow Photoshop can get while manipulating large images. Another piece of software used the GPU to encode video files faster than real-time playback, yet another was a ray-tracing application which made use of the GPU. Other tasks the GPU is being called for include protein folding via a Folding@Home client and physics simulations for liquids, soft bodies, and fabrics.

Compete This

There are to be two variants based on the GTX 200 chip—the GeForce GTX 280 will be the higher-end part (priced at around $650), and the GeForce GTX 260 will lose some of its components and be priced slightly lower (at about $399). Early benchmarks show the GTX 280 to be on par with the 9800 X2 cards on some tests, and ahead of the X2 in others. Going on the data that's out there, NVIDIA might just lose its price to performance crown to its rival's graphic chipset. ATI/AMD has taken a completely different approach to designing its graphics part. No technical information is available to make an objective analysis between the two approaches, but from a holistic point-of-view: while NVIDIA has taken the bigger, more powerful approach; ATI has gone down the smaller, scalable route. ATI's new chip—the RV770 seems designed to run in pairs and efficiently. Early tests put the RV770-based, single chip solution the Radeon HD 4850 within range of the 9800GTX, and at $200 or less. The 4850 in crossfire configuration gets within touching distance of the GeForce GTX 280, and at $100 less. AMD/ATI will also release a $300 card the Radeon HD 4870 which will run two RV770 chips on the same graphics card and will come equipped with GDDR5 memory—about 80 per cent faster than GDDR3 used in the GeForce cards.

One thing's for sure—things are certainly heating up in the graphics market. At one end you have the ATI and NVIDIA rivalry, which has already lead to price drops from the NVIDIA camp; on the other hand you have the upcoming challenger to the market—Intel. Who knows what that will bring to the scene? Well, cheaper prices for sure. This is exciting times for us consumers indeed! ☒

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BEHIND THE GAMES

Designing a modern game is no easy task (as we discovered!). To unearth how these marvels are made we travelled half way around the world to one of most reputed development studios in the business. Read about our Epic journey...

Michael Browne

When it comes to gaming, most of us, (and we include ourselves), are a very choosy bunch. We wait for a title for ages, and after getting our paws on a copy, and spending an hour playing the game, we're either with a grin on our faces...or not. In the latter, the game is proclaimed a failure and dismissed. What is also forgotten, however, is the sheer volume of sweat and human perseverance that went in from inception to completion of the game, and the labour of love that developers put in throughout its development. The idea to visit a game studio to find out exactly what goes on there, began sometime in mid-March. We decided to visit Epic Games (of *Unreal Tournament* fame) headquartered in the tiny, picturesque, and very green township of Cary—which itself is a suburb of the much larger City of Oaks a.k.a. Raleigh, North Carolina. Connected by flight via the Raleigh-Durham airport. Cary at first glance seems a quaint place with a miniscule populace—a conducive atmosphere for game development in our opinion.

After a hearty American-style breakfast, it was time to behold the lair of Epic itself. The first impression, (and one that lasts), given off by the surroundings, the building and the people themselves, is of a very casual, and laid back atmosphere underlining a very professional outfit. The grounds, complete with open lawn and a basketball court at the rear of the building and parking at the front that shows off some amazing gardening skills, add to the effect that the management at Epic wanted to create, "a place that's soothing to the soul." Inside the building, a quick look at the work area shows a very fresh and different look to each office's décor and colour. Senior management have individual offices, otherwise two or three other employees may share a room, albeit with excellent desk segregation. This is done to aid concentration, and maintain human contact throughout work hours. Throughout the tour of the building, we saw many examples of a home-like environment, from the do-it-yourself fully stocked kitchen, to the lounge, replete with pool and table tennis tables, chairs, large screen TV, and arcade games. Equally cool, was their gaming den, a large hall-like room with some 16 gaming setups. Each setup consisted of an Xbox 360, a PS3 and an SLI-configured HP Blackbird PC complete with quad core processor and 4 GB of memory! By now, you're thinking "Wow! Wouldn't I like to work there". Don't berate yourself up for any disloyal thoughts. You aren't the first to consider such possibilities (shhhh!).











After a brief tour that included a peek at their fully equipped gym, the guys at Epic were ready to talk about something we all love—games. But first, a little background lesson. Tim Sweeney, CEO and founder (1991), of Epic Games, has been designing games from his college days and is a die-hard gamer in his free time. Epic games (then called Epic MegaGames) itself kicked off with *Jill of the Jungle* way back in 1992. Their first huge title, (and one we all remember and relate to), was *Unreal* (1998), was possible due to the teaming up of Epic with two gifted individuals—Cliff Bleszinski and James Schmalz.

Once inside their conference room, we settled into comfy sofas. The walls were liberally plastered with art work and renders from Epic's upcoming title *Gears Of War 2* (*GOW 2*). There were soft drinks, burgers and other snacks, well within arms reach, throughout the session. The current focus of Epic is very obviously on *GOW 2*.

For those who don't know, the original *GOW* (released in November 2006) was one of the best X360 titles till date. In fact, *GOW* alone accounted for a noticeable hike in the sales of the console after its release. Although the sequel is set for November this year, we're told that the game is ready, and testing and fine tuning gameplay is currently in progress. The team has been at work on this prequel, the original. For us, *GOW* was one of the best efforts at a third-person shooter on any console, simply because of the amazing player control and camera angles. In fact, we fondly remember the happy hours spent at GOW, and quite a few of our team got hooked on the game. In short, GOW came close to delivering a PC-like third person experience. But as Cliff Bleszinski ("Cliffy B" to everyone) says, "the best is yet to come". The team is candid about the shortcomings of the first title, and it's obvious they won't repeat the same mistakes with *GOW 2*. It's clear that their work is their passion, and everybody seems thrilled to be asked about the game itself. Even silly questions we put forward are answered patiently and accurately.

Having played *GOW* so much, we put forward the obvious—How is *GOW 2* better? Epic answers "In every way". We want specifics particularly of the eye-candy variety. Mike

Capps, President of Epic Games gives it a shot—"The answer is the *Unreal 3* engine". But that was used for the original game too, our plaintive protest. What's new? "You want it, you got it!"—with those ominous words hanging in the air Mike rattles off about the various technical aspects of *GOW 2*. Here are the words straight from the man's mouth:

1. Ambient Occlusion / Post-Processing Filter: *Unreal Engine 3* (*UE3*)'s ambient occlusion technology renders an approximation of global illumination by calculating the accessibility of each pixel. The result is increased perception of geometric shape for the entire scene, including dynamic characters. The effect is scene-independent and operates with constant memory and performance overhead with no pre-processing.

2. Advanced Character Lighting: Improvements to the *UE3* character lighting system enable the engine to more accurately synthesise complex light environments. Fill lighting is added using the increased accuracy to maintain the contrast of character details. Character shadowing accuracy has also been enhanced.


A typical designers desk is never complete without action figures

3. High-density Crowds: *UE3*'s new crowd system with flocking technology can simulate in real-time hundreds of characters within a scene. Battling the Locust Horde in the original *Gears Of War* often involved attacking five or six enemies at once, and it's now possible to have masses of enemies onscreen at once.

4. Dynamic Fluid Surfaces: The water technology in *UE3* breathes life into liquid surfaces. Sophisticated water physics combined with realistic specular and environment reflections produce a realistic, liquid-like feel. Characters have dynamic interactions with the water and this adds a layer of realism.

5. Matinee improvements: Matinee is used to build real-time cinematics that play back in-engine. This *UE3* system has been substantially improved to give artists movie director-class control over all of the objects in a scene, as well as cameras and cuts, plus we have added an in-engine, real-time preview feature that plays back all the visual effects of a cinematic.

6. Soft body physics: Through the incorporation of Aegia's soft body physics simulation technology, *UE3* can realistically simulate elastic and deformable objects, and thus produce more organic game worlds. Players can interact with flexible objects, and gelatinous surfaces can exhibit sticky properties.

7. Destructible environments: *UE3*'s new fracturing tool and, enable developers to take virtually any existing mesh, slice it up into as many fragments as desired, and destroy structures. This structural analysis tool produces far more realistic, destructible environments.

He continues: "Many gamers still consider the original *Gears of War* to be the technical bar for next-generation gaming—and that was our first Unreal Engine 3 title. We've been working on the technology for two years, so of course, there are tons of great new features. It's also been greatly optimised, which helps us to make *Gears of War 2* even bigger and badder than the first game".

After that rather lengthy description and a look at some of the screenshots, and in game footage of *GOW 2*, it is time for a little break, hosted by Cliffy B, as we're led through the corridors of the building for the second time. We're at the front lobby now and the time is around 1 pm. Several employees are just entering the building. Cliff reiterates the casual work timings, "They leave late, (incidentally, 7 pm is late for them!), so they're in late as well. The core working hours are 1.30 pm to 5.30 pm, and we try to ensure our presence during these hours, otherwise it's mostly cool". The back of the building has a rather large open-air veranda with a few chairs and tables spread around. Someone asks what is perhaps the most clichéd question ever—what are the three best things about working here?

Cliffy replies: "One, the people... I work with the most intelligent and talented people in entertainment, and every day is filled with challenges and surprises that keep me on my toes. Two, the environment... our office feels professional, yet cosy. There are no cubicles, and food is provided during the busier times, and everyone's got action figure and lastly creative freedom. Lastly, Epic builds our own universes, and thus, we have enough wiggle room to dream big".

A couple of questions more about Epic's prosperity after their recent success with *GOW* and the just released *Unreal Tournament 3* had Cliffy joking "Our car park has been upgraded quite a lot over the past two years, with many faster, more expensive cars". We share a moment of mirth and head back inside. *En route* their press room, we make a quick stop at Cliff's office. His desk itself is huge, strewn with magazines, odds and ends, and to top it all, a multitude of action figures—Cliffy is a proud collector of more than 150 such action figures. A pretty impressive looking PC with a large monitor dominates one side of the desk and the action figures take up another third, along with tons of images depicting concept art from titles he's worked on, including *Unreal Tournament 2003*, *UT 2004*, and *Gears of War*. His desk is his den, and obviously the heart of his productive soul.

After a little more talk about *GOW 2*, and the technical aspects of the *Unreal 3* engine, we went for a late lunch. During the healthy yet sumptuous meal, we got talking again:

Does game development follow a particular procedure? Are there any stages to the procedure? If so, what are they?

Mike Capps: There most certainly are procedures and stages to the process. It's like creating any other product. There's a lot of hard work, and most of us put in very late hours, but since we all love what we do, we have loads of fun too. Game development is a complex and expensive process. Most ideas never become reality because today's top-tier games cost tens of millions of dollars (and years!) to develop, and the respective marketing budgets are just as costly.

OK, so what about those stages?

Capps: Ah yes! For us, the first stage is the pitch. Epic continuously canvasses its employees for fun and original game concepts, and these ideas require extensive evaluation. These concepts are narrowed down through discussions, in which everyone is allowed to participate. The submissions are then presented for a more formal evaluation for key stakeholders. If the concept is scrapped at this stage, we start from scratch and the process mentioned above is repeated. If a concept is greenlit, or approved for production, the game-to-be moves into pre-production. Everyone has to be totally committed to a concept before it gets greenlit for production.

During pre-production, (Stage 2, in-case you were counting!), producers and designers create design documents and technical specifications based on the development timeline. It's essential for large teams to assess the myriad needs during these early phases in order to maintain quality and keep games on schedule.

At this point, we start getting the idea that game development isn't all fun and (pardon the pun!) games, and there seems to be a whole lot of work involved, with close teamwork and coordination between teams. We questioned Mike a bit more on what a design document is.

Capps: Design Documents are sort of a wish list for components and essential elements that the game should contain or implement or include. Technical specifications include the nature of the engine, the special effects, physics and other specifics like shading, lighting and damage models to be used.

The next stage involves game production. Full-on game production involves implementing features described in the design document, and it's a constantly evolving process as features may be added, dropped or modified depending on time or technological constraints. The production stage can be broken down into phases called alpha, the first playable version of a game, and beta, the playable version complete with features and assets.


Entertainment galore...Epic plays as hard as they play...err work


Typical Epic productivity dens

Capps adds that Epic's motto is polish, polish and polish. To further quote him "When a game reaches beta, it may contain bugs or gameplay balancing issues, so we spend a lot of time tweaking gameplay and optimising levels to satisfy internal expectations and standards. Quality assurance testing is a challenging process that can last six months or more. Our testers bang on our games, time and again to ensure that we have explored every possible decision and taken every path in-game to ensure a smooth and exciting user experience". This is an important stage for a thoroughly professional outfit like Epic, especially considering the scale of the games they work on, and even a single overlooked aspect could cause a lot of problems. We've all played games, which have certain levels beyond which progress is impossible due to a bug, or a game crash, or a part of a level that may be inaccessible, and we know how annoying that can be.

Whew! Is that all? We ask hopefully. Not quite, Mike quips—there's Post Production which wraps up with the end of QA testing, submission to console certification when appropriate, and approval for manufacturing. Once this transpires, the game is sent to the manufacturer for replication, and packaging materials are printed as well. Components are then assembled, packed, sealed and shipped to retailers.


A few of the Epic team caught just after we emerged from our hands-on with GOW 2

Then there're a lot of other concurrent processes in addition to game development. While making a game, there are teams of external

The Indian Angle: Trine Studios, Mumbai

So what's the game development scene in India like? We spoke to Somil Gupta, Managing Director, Trine Animation Studios Ltd, Mumbai about their organisation, gaming in general, and upcoming titles.

Trine consists of a team that is 80 members strong. 70 of these are developers and animation artists. Sangam Gupta, Somil's brother and Trine's CEO tells us that their strategy is to attack the international market with localised content, somewhat like what the Japanese have done with ninjas and samurais in their games.

The stages involved in game development according to Somil are Conceptual design, preproduction, production, alpha, beta, gold.

When asked about game titles, Somil is all about the Indian angle to gaming. He feels Indian folklore, locations, and even mythical events all have enough subject matter to capture the interest of the Indian gamer. We seem to agree that an Indian flavour to such games is certain to attract a larger audience in India, especially, those completely new to the world of games. From a marketing standpoint, this strategy could well work in Trine's favour, and succeed where other Indian developers have failed.

Trine's current flagship is called *Legends of Great India* and is an RTS game based around mythical and religious characters like Hanuman, Ganesha, Rama and Arjuna. The goal of this game is to save India from all evil including Ravana and his minions. Get set to use a fantastic array of powers and control armies of hundreds of troops. Although the plot may seem simple, it's the implementation that we're interested to see when this game is finally out. Somil tells us they use cutting edge graphics in their titles and this game is based around DX 9 SM3, and even DX 10 implementations are being experimented with.

The other two titles in development are *Streets of Mumbai*, which is an *NFS Carbon*-like game based around the streets of Mumbai, as we know, which are home to many (sometimes) illegal races. In this game, you can upgrade and mod your car with cash you acquire by winning street races. There are as many as 20 cars to choose from and a variety of eye-candy mods like rims, paint jobs, lights, hoods, side skirts and bumpers to choose from.

Wings of Control the other game Trine is working on, is an aerial combat based game focussed on tactical dogfights. You can choose from between seven models of fighter planes, and the game is based around an alternate world scenario where you fight for aerial domination. This title promises to be a LAN gamers delight.

With some rather unique titles in the pipe, we're really interested to see where Trine takes this bold initiative. For us gamers, more game studios in India can only be a good thing, as competition will lead to improved content, and gameplay. All we can tell Trine is to "bring em on".

marketers, retailers, buyers, distributors, hardware vendors, and other specialists in the channel, working to guarantee a successful product launch.

The amount of work involved in actually creating a game, let alone promoting, circulating and distributing it, seems mind boggling. Considering that the development cycle for a single game could be as long as four years there's a huge timeframe involved in each of these stages. Loads of work and sleepless nights are expected, even for a team that is as gifted as Epic's team of programmers, designers and testers.

It was now quarter to three in the afternoon, and we were shown into a large darkened hall. This, according to Cliffy is where all the parties and frag fests occur. There were four rows of desks, each with five chairs neatly arranged. Each seat had an X360 hooked up to a small 22-inch LCD TV, and (surprise!) *GOW 2* was running on each of these systems. It seems the Epic team had arranged for us to go head-to-head, and there were four five-man teams organised, most of the players were of course Epic and Microsoft employees, who from the looks of it, had spent several hundred hours apiece on the original game. The prize for the winning team—an X360 Elite console system for each player—wow! A few sniper headshots and gory chainsaw melees later, it was clear that our team sucked. However, the forgiving nature of Epic's team and *GOW 2*, allowed us to improve somewhat and our team managed to reach the finals where we lost spectacularly to a five man squad solely from Epic. Their role in the company—game testers—damn!

After this three-hour session, a few people stayed behind, to play the game some more. Although this isn't really a preview, our impression is *Gears Of War 2* seems a lot more polished and balanced than the original. There've been minor tweaks done to map visibility around the character. The player-controlled character's body movements themselves have been subtly reworked. There're a couple of new weapons including a well done (pun intended) flame thrower, and each weapon gets a new, gorier finishing animation. There're also a couple of new map styles for the multi-player components. The single player campaign is equally robust, and we're told, more movie-like in terms of plot twists.

By around 6:30 pm we were done, after which we had a quick snack and a Coke with Epic, discussing our impressions of the game and exchanging opinions. Another half hour later, we were aboard a bus to our hotel room. Thus, concluded a tour, which has left many good impressions firmly entrenched in our noggins. Firstly, games aren't easy-to-design (a gross understatement this). Secondly, Epic's working environs totally rock! Thirdly, *GOW 2* seems the real deal, and all set to make an even bigger splash than it's predecessor did back in 2006. Lastly, November can't get here soon enough! ☒

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From A Hacker's Diary

Waiting to *boot* the spirits of Freedom

Aasis Vinayak

Recently, I launched the alpha release of Integle—an Intelligent Search Engine based on artificial intelligence—(**www.integle.org**), and have many volunteers for the project. In fact, I'm really looking for someone to do the design work, as I want to have a decent lay out (rather than that of Jade) and wanted to implement the libraries of the new language (that may solve the current rendering issues and I need not use PHP to deliver stuff).

Alexandre Oliva of FSF Latin America, is associated with the kernel-libre project of GNU. This project aims to remove all the non-free part of the code. Due to the huge inflow of e-mails that I have been receiving, I inadvertently missed out on a mail from him. I wanted to have a look at the automation scripts that they were using for the process. He gave me all the relevant info that I wanted, and I learned more about the deblob-main that can be used in the deletion-process of non-Free bits from the Linux kernel. The script will, in turn, utilise `deblob-<kver>` and `deblob-check` (you can cross check whether a source file contains any remaining or suspicious firmware).

My motive was something else. I could apply some tools while experimenting with another project of FSF—Coreboot (**www.coreboot.org**), earlier known as LinuxBIOS. The project is aimed at replacing the standard BIOS firmware, found in most computers, with free software. It has many other features other than being absolutely free software. It boots faster (3 seconds to Linux console!) and is written in C (contains virtually no assembly code). Further, it averts the need for very slow / buggy / proprietary BIOS.

The Coreboot project started in 1999, in the Advanced Computing Laboratory at Los Alamos National Laboratory. I experimented with it on an AMD Geode LX (x86-compatible system-on-chip microprocessor) and found it to perform better. Similar was the response of some of my friends who dared to have a trial in Intel Pentium II / III (Emulation) configurations.

Coreboot usually loads a Linux kernel, but it can load any other stand-alone ELF executable *bits and pieces*. For example, it performs well with Etherboot, which can boot Linux from a boot server or ADLO for Microsoft Windows 2000 / XP and OpenBSD. Coreboot is supported by motherboard vendors like MSI and Gigabyte (and even Google partly sponsors the venture). They offer Coreboot next to their standard BIOS.

Another related project is the Open Firmware project (or OpenBoot) by Sun Microsystems. It is a standard, defining the interfaces of a computer firmware scheme. It is being used by many giants like Sun, Apple, IBM, and most other non-x86 PCI chipset vendors. The Open Firmware even allows the system to load platform-independent drivers straight from the PCI card. It can be accessed through Forth language (structured imperative stack-based computer programming language) shell interface.

The majority of implementations provided by OpenBIOS rely on a supplementary lower-level firmware for hardware initialisation like Coreboot. LANL, AMD, Coresystems GmbH and Linux Networx, Inc contributed much for these projects. Some vendors helped by providing specifications of the hardware interfaces for some of their latest motherboards.

However, Coreboot may work in desktop PCs, servers, clusters, embedded solutions, STBs / HTPC or thin clients, but not for my laptop. Oops! Still I have to use the buggy BIOS for my debian-powered HP DV2713TU. I have only two ways towards a resolution—wait for Coreboot to come out with a solution, or join the project and contribute—then wait for the stable release. I prefer the latter. ☒

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"The Coreboot project is aimed at replacing the standard BIOS firmware—found in most computers—with free software"

About the Writer

The writer is the developer of Mozhi (**www.mozhi.org**)—an Indian Language search engine, and the CEO of The Analyst Magazine (**www.theanalystmagazine.com**) and Free Lecture Notes (**www.freelecturenotes.org**). His research work / publications in Computer Science and Physics are available at **www.aasisvinayak.com.**

The views expressed in this article are those of the author, and are not intended to represent the views of Digit.

Scream & Shout!



Keymat YALOS Diamond

When you love bling, all else ceases to exist. When you hear of the Keymat YALOS Diamond, the average geek thinks, "Diamond screen?" and promptly faints. The YALOS, however, has other plans. Sure, it's a nice screen, but the real value lies in the plating of white gold and the encrusting of over 160 diamonds—four grams of the stuff, in toto. At $130,000 (Rs 55,90,000), the YALOS is the Vertu of the HDTV world—whether that's a good thing usually depends on whether you can afford it.

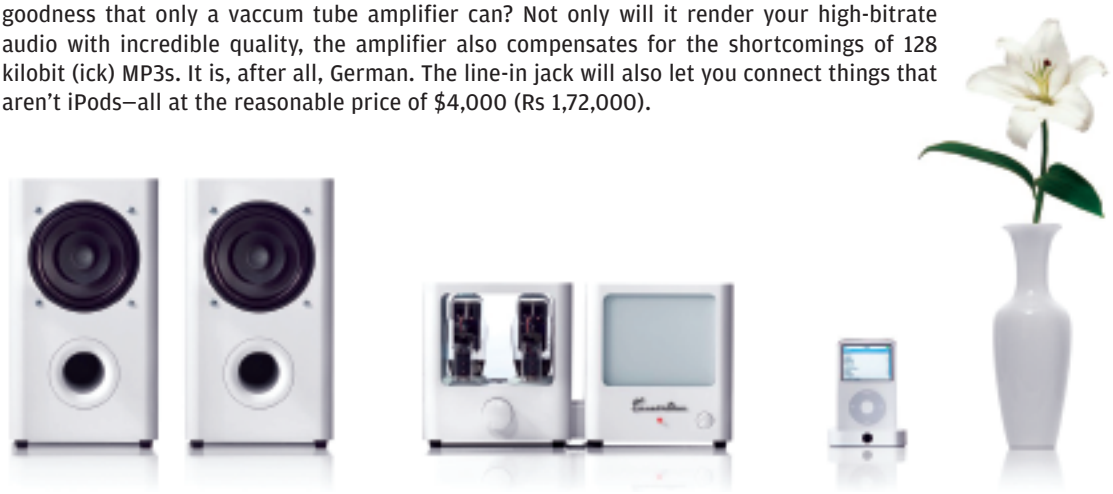


The Buzzball

We don't know if you've ever heard of Zorbing—the act of placing oneself inside a ball, and then rolling that ball down the hill—a concept cooked up by some rather nutty Kiwis. The downside of this is that you need (a) a hill, and (b) someone to push you down it. Enter the Buzzball—instead of leaving the passenger at the mercy of gravity, it consists of two motors—connected to a wheel each—which let the passenger (now driver) control the motion and direction of the Buzzball. The driver will also be able to control the Buzzball by shifting his weight, and execute exotic manoeuvres including (but not limited to) triple-puke-inducing-barrel rolls.

Hammacher Schlemmer Triode-Tube iPod Speakers

Why waste the iPod's audio quality on solid-state transistors when you've got this aluminium-clad, vacuum tube-toting amplifier just waiting to give you the pure, distortion-free audible goodness that only a vaccum tube amplifier can? Not only will it render your high-bitrate audio with incredible quality, the amplifier also compensates for the shortcomings of 128 kilobit (ick) MP3s. It is, after all, German. The line-in jack will also let you connect things that aren't iPods—all at the reasonable price of $4,000 (Rs 1,72,000).





CXC Motion-Pro II Simulator

Ah, the wonderful race car simulator—the dream of every geek who ever played *Need for Speed*. CXC's Motion-Pro II has a 5.1 surround sound system aided by vibration transducers—so you can feel your engine roaring under your hindquarters—and a full-motion simulator that'll throw you back when you accelerate and jerk you forward when you hit the brakes. You also get a beautiful, gaming-grade 46-inch HDTV; if you're loaded, you'll get three! Each Motion-Pro is built to order (including seats built for your waist size), so we're guessing that the price is considerably higher than what we're imagining right now.

Ferguson Hill FHOO1 Horn Speaker

It isn't just the beauty of these speakers you must admire—there's also the fact that instead of using huge amplifiers for loudness, they use acoustic horns that you can't help but stare down. The FHOO1 goes loud with even a teeny five watts, delivered by a clear, low-power amplifier. A pair of 1.65 metre-tall speakers retails for a little less than 10,000 pounds (Rs 8,50,000), and may need to be accompanied by the FHOO2 bass units (if you don't like the horns' bass delivery) at 2,500 pounds (Rs 2,12,500) for a set. Just keep your eyes peeled—wouldn't want to walk into those transparent cones now, would we?



Enhance

Learning New Languages

Nash David

With a global village like ours, what better role in your life can we as your technology navigator play, than making it an even friendlier place! We believe learning newer languages always forge better ties and improve relationships irrespective of barriers. No longer should a Spanish *dama* hesitate to learn how to make *aloo parathas* from her new online friend, a traditional *kudi* from Amritsar. Besides, our very own Mr. Chattopadhya from our good old City of Joy, should not feel dumbstruck when negotiating on a deal in not-too-far Thailand.

The Learning Process

There is no single or perfect way to learning. Needs differ, and so do solutions. There are various methods you can adopt to learn a new language. You may go the purist's way of systematically learning the alphabet, then mastering words, and then moving over to sentences. Finally, cautiously proceeding through getting the grammar right. On the other hand, some people believe in being practical, that is, getting straight to the point—learning what you need in daily conversations, and then managing your way through life! Finally, there is one more path you can choose in your quest to overcome your hurdles because of inferior linguistic skills. Make new friends, who speak the language of your choice, and by mutual sharing, enhance your skills. Sounds good... right?

The Learning Resources

If those learn-in-30-day-books were really all that effective, this article would not be warranted, neither would there be a vast storehouse of resources available online. We believe you're already aware that there is no shortcut to success, but hard work. We're just showing you where and how to get there. In the bouquet of offerings that the Internet provides, we present three valuable sites—BBC Languages (**www.bbc.co.uk/languages**), Live Mocha (**www.livemocha.com**) and Before You Know It (**www.byki.com**).

You got the whole world in your hands..., **and so the song goes. It sounds familiar too. This is, certainly a small world getting even smaller, in the Internet age**



Shrikrishna Patkar

Mind Your Language!

British Broadcasting Corporation—if you don't know them, you have no excuse. As far as credibility, quality and authority is concerned, we can take their *word* for it, irrespective of the language.

BBC offers its services in a wide range of languages—from Chinese, French, German, to Greek and Spanish. Now considering you want to learn French... or *Francaise*, then all you need to do is click on `Choose a Language > French (FRA)`.



A cool and friendly look makes it easy to use

Once you're at the page for the language of your choice, it's smooth sailing. Click on `Learn Online > Online courses`. From here, it's all self-explanatory and meant to be that way, so that you don't have to be dependent on anyone.

Click on start, and you'll step in to a whole new world. You'll see many probable situations that you could probably encounter in real life. As an example, click on `Short break in Paris > Getting a snack`. It shows you the most common dialogues that could crop up in a restaurant. For example, the waiter comes up to you and asks—what would you like? Considering you already know the tongue-twisting names of dishes available on the menu, you should be able to reply in crisp French, "I'll have a cheese sandwich". In addition, it also has the pronunciation for the keywords used in the conversation. This comes in very handy, especially, with a language like French—it's written one way and pronounced some other! If you have no prior knowledge of the language, then use the audio clips, so that you get the authentic pronunciation.

Livemocha

This site adds the benefit of collective intellect in the form of social networking, to spice up your learning experience. After registering on the site and confirming your e-mail address for authenticity, enter the languages you know and the languages you want to learn.

Live Mocha shows you a list of users with



A vibrant site in the way it brings together people from across the globe

the opposite needs. Say for example, you know English and Hindi, and want to learn German, then Live Mocha will show you all the native German speakers who want to learn English or Hindi.

You get the best of both worlds. Not only do you get authentic advice on the language of your choice, but also get to make new friends, who give you the consolation of talking to another human, rather that interacting with a server.



Monitor your learning curve from a dedicated inbox

Live Mocha brings you an easy-to-follow inbox, through which you can monitor exactly where you stand in your learning curve. You get to see users who're learning the same language as you and users who speak the same language as you. This way, learning is easy and comfortable.

BYKI

The last site that we present here, has a dedicate software for each language. The number of them in total—a massive 64! As far as the methodology goes, it's quite similar to the good old way that BBC follows. What sets this apart though, is the host of languages. You get dedicated software for each language. Go to `www.byki.com/default.html`.



With a vast list of 64 languages available for offline learning, BYKI has an added benefit.

First select the language you want to learn. Say for example, you want to learn Spanish, just click on the link that says `Spanish` under `Free Language Software Downloads`. Enter your e-mail address to receive the download link. Once you click on the link sent to you to for verification, download the installer that follows. Once you run the setup, BYKI automatically downloads the required files needed for a smooth study. The installer by itself is just 105 KB. However, the files that it downloads can go on for quite a while, especially if you have a slow Internet connection. You'll be reminded of your typical Yahoo! messenger downloads.

Once the files are completely downloaded, you have software residing on your system—you no longer need Internet access, neither are you pressurised to learn in any time frame. You can use the software for as long as you wish—it's fully functional, completely free, with no time limits.

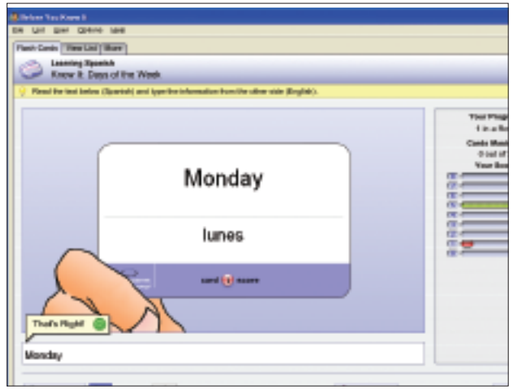
With BYKI, learning a language gets really exciting. The striking difference is that you're not distracted, as you don't really need an Internet connection once you have downloaded the files and set up the software. It plays you the audio recorded by a native speaker. BYKI proceeds in steps—the test gets stringent with each passing stage. You need to review your cards, recognise, know, produce and finally own your cards.

Say for example, we're learning the days of the week. Then in this case, you'll be flashed seven cards with the names of the day written in Spanish as well as English. Once you're familiar with the cards that you have, it proceeds with the test.

While recognising, you're given the option to think and are given the choice of verifying whether you guessed it right. This way, although you're being tested, it's not obvious!

In the Know It stage, you're shown the word in Spanish. You need to type the English word for it. Similarly, in Produce It, you're shown the English term, and you need to reproduce the Spanish term. This way with all permutations and combinations, your ability on a particular subject is thoroughly scanned.

We believe it would be grave injustice to compare these resources among themselves, because as we said earlier—*needs differ and so do solutions*. So while one site may appear a boon to one person, it just may not work out for another. To get the most out of these resources and to learn faster, select the resource of your choice depending on the way you respond faster. If you're more comfortable with a friend teaching you, then Live Mocha is certainly the place for you. Similarly, if you're one of those who get distracted easily while browsing and need some time of concentration to be able to learn, BYKI is definitely your solution.



With BYKI, you monitor yourself

Another reason for BYKI is if your language isn't covered in the other two sites, which can most probably be the case if it is some rare and exotic language! At the end, if the language that you intend to learn is one of the popular ones, then it is, in all probability, covered by BBC Languages. Additionally, it has a vast range of resources—grammar, dictionary, TV and radio programmes, etc. The opportunities are literally endless, and you would certainly feel the culture of the country lighting up as you go about studying its language.

There's more to Spanish than *uno*, *dos* and *tres*! ☒

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MojoPac
www.mojopac.com

If you're the my-USB-stick-is-my-everything type, this one's for you. MojoPac is a utility that installs on your USB drive (broadly, any hardware that your PC recognises as a Mass Storage Device—your phone, your PMP, and more) and gives you a virtual Windows XP desktop on each computer you plug this drive into. It's almost like logging on to your own computer—your settings, your wallpaper, your programs, someone else's hardware and someone else's Windows XP.

Here's how it works—MojoPac uses the existing Windows OS on the *host computer* (the PC you're working on) to create a new working environment for you. This environment is insulated from that of the host PC, so none of the changes you make to this environment will affect the host PC. Your USB drive becomes your new `C:` drive, which also means you won't have access to the programs installed on the host PC—a security feature that protects the host PC from your activities. You can, however, install your own programs—even games—in your environment just like you would on any Windows PC, and they'll be available to you wherever you connect your drive—it's practically like carrying your own computer around!

Are you tired of pretending to pay for software? Is the guilt too much? Not enough seeds? Take a break and check out some of the best freeware tools ever made

Traveller's Tip
To optimise the performance of your drive, open My Computer on the host PC, right-click on your USB drive and choose Properties. Under Hardware, select the USB drive and choose Properties. In the dialog that pops up, you'll see that "Optimize for quick removal" is selected by default—change this to "Optimize for Performance".

The Alternative
There's no tool that offers the virtual desktop that MojoPac does, but if what you want is the ability to carry your programs around with you, there's the Portable Apps Suite (www.portableapps.com/suite), that bundles Firefox, OpenOffice.org and many open source tools that can be run off a USB drive without changing the settings on your host PC.



Kiran Bhosle

Maya 8.5 Personal Learning Edition
http://usa.autodesk.com/adsk/servlet/index?siteID=123112&id=7639525

Maya is among the best tools ever made for 3D modelling, animation and special effects. It isn't, however, the easiest to learn, and your only recourse (if you wanted to go about things legally) would have been to take some rather expensive lessons. Maya Personal Learning Edition (PLE), however, changed that.

Maya PLE is clearly geared to letting you learn modelling only—while you get all the tools you need to learn how to model in 3D, many other options are quite limited—the output resolution is limited to 1024 x 768 and all your renders are watermarked. You won't even be able to save your work in the default Maya file format—the PLE has its own .mp format, which isn't compatible with the commercial version. Despite these restrictions, this still gets our favour for the simple reason that it gives you access to the same tools that the professionals use. If you're looking to make a career in 3D graphics later in your life, knowing Maya is a big plus. And then, there's that interface.

Nimish Chandiramani

The Alternative
Maya's interface is more than unconventional, but has some really neat tricks up its sleeve. The right-click menu gives you the most useful commands arranged in a circle, which makes them easier to access—once you get used to them, you'll subconsciously remember the angle to move your mouse at. In the top-right corner of the main viewport (that's where you can see your model), you'll see a cube with arrows pointing to each side. When you click on an arrow, the view shifts to show you your model from that angle—click on the arrow on the top to see a top view, for example. This, naturally, is far better than fiddling with View menus.

The Alternative
Blender (www.blender.org) is an open source 3D modelling tool that holds its own against other professional tools as well. Its interface, however, is even more incomprehensible than Maya's and can be very disorienting. Then again, it's free, without restrictions, and has a bunch of plugins available for it.

Opera
www.opera.com

Firefox may be the alternative browser of choice, but it was Opera that started the tabbed browsing revolution. Now, it features an inbuilt e-mail client, IRC client and RSS reader. It's also renders Web pages faster than any other browser. The latest version—9.5—also features Opera Link, which lets you send bookmarks and other settings online, and synchronise them with other copies of Opera you might use—including Opera Mini on your mobile.

One of Opera's best features is its support for mouse gestures—you can perform a multitude of tasks by holding down the right mouse button and moving the mouse a certain way. Holding down right-click, moving the mouse downwards and releasing, for example, opens a new tab. Other neat features include Fast Forward, which automatically detects "Next Page" links so you can navigate forward using a mouse gesture instead of hunting for the link yourself. You can also set Opera to masquerade as IE or Firefox for sites that call it an "unsupported browser".

Google doesn't love Opera, though, so you'll find that Google's online applications revert to their older versions with Opera. However, by using Mask as Firefox, everything sets itself right.

Keyboard Warrior's Tip
Another important part of Opera's awesomeness is that you can go through an entire session of browsing without ever touching the mouse. To cycle through all the links on a page, hold down `[Shift]` and use the arrows to move from one link to the next. The program's also smart enough to start highlighting only links in the visible portions of the Web page. Hit `[Enter]` to visit a link, `[Shift]` + `[Enter]` to open it in a new tab, and `[Ctrl]` + `[Shift]` + `[Enter]` to open it in a new tab without shifting focus from your current tab. You can also use `[1]` and `[2]` to navigate between tabs.

The Alternative
Firefox (www.getfirefox.com) is the world's second most popular browser, and is catching up fast. While it doesn't have all of Opera's features when you install it, you can extend its functionality using some of the many extensions that enthusiasts are developing for it.

Google Desktop
http://desktop.google.com

It's Google search. For your PC. How could it not be filled with goodness? Google Desktop starts where Windows' (or Linux's, for that matter) default search ends. You also get a Vista-like sidebar, complete with Google Gadgets—though the gadgets available are quite underwhelming. Even better, you can turn off this sidebar and opt for the simple-dialog-box approach.

The simple `[Ctrl]` + `[Ctrl]` shortcut becomes your ticket to everything—you can use Google Desktop to launch applications, rifle through your music collection, search for text within documents, search the Web, even look into your Gmail. Google Desktop caches everything it indexes, so even if you've deleted a file, the cache will let you view its contents. The best part? All this happens as you type.

Googler's Tip
For Google Desktop to work effectively, it needs to index your hard disc/s, which can take time. Configure it to index all your discs (you can do this in Preferences) and leave it overnight. When you come back to your PC in the morning, you'll have all you need at your fingertips.

The Alternative
Copernic Desktop Search (http://www.copernic.com/en/products/desktop-search/index.html) is one of the first desktop search applications to ever

come into existence. In its current version, it offers nearly all the functionality of Google Desktop, minus sidebar and gadgets, and without the ability to check your Gmail.

AutoHotkey

www.autohotkey.com

If you've got mundane, repetitive tasks to perform—and who doesn't—AutoHotkey will let you do them using any keyboard shortcut of your choice. It lets you record keyboard and mouse activity and repeats it as many times as you'd like—much like macros in Word or Excel. It uses its own scripting language, and once you master it, you can create your own mini-applications that'll do anything you want them to—from replacing a string of characters with a phrase to looking up a highlighted word in the dictionary.

You don't really need to learn AutoHotkey's scripting language to get started—it comes bundled with AutoScriptWriter, which records the macros for you. One of the first things we do immediately after installing AutoHotkey is to assign Windows key shortcuts to our favourite applications—`[Windows] + [O]` becomes Opera, `[Windows] + [Q]` becomes *Quake 3* and so on. Other such simple tasks follow, but to really tap AutoHotkey's capabilities, you'll need to learn the language—which, fortunately, is fairly easy to learn. You'll find a detailed tutorial here: http://www.autohotkey.com/docs/Scripts.htm.

Hotkeyer's Tip

If you're working on multiple PCs and want to take your scripts with you, you can compile them to make each script a standalone EXE—just right-click on a script and choose Compile Script! Once you've done this, you can run this EXE on any PC, so your shortcut or text replacement scripts can travel with you. They reside in the system tray, and ending them is as easy as right-click > `Exit`.

The Alternative

You can get your Windows key shortcuts with WinKey (http://www.winkeymx.com/), but there's really no alternative to AutoHotkey that even comes close to what it offers.

Winamp

www.winamp.com

It's easy to have forgotten about Winamp—after Windows Media Player (WMP) was finally able to manage your music library, many of us didn't look beyond. And, of course, there were problems with the program itself. Winamp 3 was a nightmare best not talked about and Winamp 5 didn't match the performance of the original Winamp 2.8. Fire up the new Winamp 5.5, however, and we're impressed once again.

For one thing, Winamp's got a slick new interface, but still gives you the choice to use the original Winamp skin from way back when. The Music Library adopts the now standard three-pane interface (artists, albums and tracks) and lets you search for artists and songs in real time. You can double-click on songs to add them to the playlist—it doesn't sound like much, but this is a feature many loved in WMP 10 and sorely missed in WMP 11. You can even manage your video collection, apart from regular features like ShoutCast support. And then there's the one killer feature that sets it apart—GraceNote.



Song-hummer's Tip

We all have our share of files called Track01.mp3 by an artist we don't know, and quite often, these are songs we really like. With Winamp, thanks to a tie-up with GraceNote, you can now find out who sung this mysterious song. In Winamp's playlist, right-click on the file you want to identify and choose `Send To > Autotag`. Make sure you're connected to the Internet, and within seconds, you'll see all the song information you need. Apply the new ID3 tag and be on your way!

The Alternative

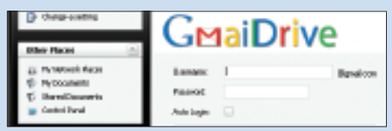
Yahoo! Music Jukebox (http://music.yahoo.com/musicengine/; formerly MusicMatch Jukebox) is another media management tool we like—it's easy to use and does its job well. You can also use it to listen to LaunchCast radio stations, and it'll change your Yahoo Messenger status to show which song you're playing (should you choose this option). Only... it's purple. *Purple*.

Gmail Drive

www.viksoe.dk/code/gmail.htm

How much of your 6 GB (and growing) Gmail mailbox are you really using? Gmail Drive is a simple Windows shell extension that lets you use your Gmail inbox as online storage. You simply give it your Gmail username and password and you'll find another hard drive listed under My Computer. When you upload a file, it appears as a new e-mail in your inbox. To avoid the hassle of seeing a new e-mail every time you upload a file, you can create a filter in Gmail that archives all such mail (the subject line contains "GMAILFS").

It may not be the most extensive tool ever made, but Gmail Drive is the best way to use all that free space that Google has so generously given us all.



Joost

www.joost.com

Simply put, Joost is free TV. If you've got a respectable broadband connection, you can download the Joost client and watch shows from all around the world, free of cost. Joost uses peer-to-peer (P2P) technology to get your video to you, so it's acceptably fast even on a 256 kbps connection. The video quality isn't anything worth raving about, but is not too bad—the price you pay for free access on a comparatively slow connection.

Joost gives you over 480 channels to watch; how many of those are actually worth watching, we leave to you to find out. The categories range from comedies to cartoons to documentaries and much more. You can even hack up your own channel by choosing your favourite shows and clubbing them together. The best thing about Joost is that it's completely on demand—you can watch whatever you want,



any time you want, and end the show if you're not enjoying yourself. Unfortunately, you must still deal with advertisements—that's how the company supports itself.

Viewer's Tip

Using Joost is pretty straightforward, so we'll take a moment here to recommend *Creature Comforts* under Cartoons & Animation.

The Alternative

Move along now, nothing to see here.

Free Download Manager

www.freedownloadmanager.com

Free Download Manager (FDM) is one of the most feature-packed download managers we've ever used. It's got all the essentials—the ability to split downloads, use different mirrors for the same file, download Flash videos from sites like YouTube, even BitTorrent support—and then adds a whole lot more. If you enable FDM's community features, you'll be able to see comments that users have left for each download—these comments can be quite helpful, steering you away from virus-infected downloads or telling you how to run an XP-only program under Vista. Another feature we like, is the ability to preview the contents of a ZIP archive and decide which files to download.

In its latest version, FDM also scans your PC's programs to see if you're running the latest version of everything—if you're not, FDM will download the necessary updates for you. It also sports a Web interface, so you can start downloads on your home PC from wherever you have Internet access.

If we were to gripe about anything, it'd be that FDM's clipboard monitor can get a bit over-enthusiastic sometimes—we can't count the number of times it's offered to download download.php for us.

Downloader's Tip

Always—and this applies to any download manager—change the number of simultaneous connections to a server to 10 by default. This'll make optimal use of your bandwidth, which really means that other applications won't have as much luck getting data from the Internet.

The Alternative

Orbit Downloader (www.orbitdownloader.com) has the same set of features, but doesn't integrate with Opera as well, and doesn't have the community goodness that FDM does. ☒

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CDBurnerXP

http://cdburnerxp/se/



We've become so used to the copies of Nero that come bundled with our CD or DVD writers that an alternative is almost unthinkable. CDBurnerXP gives you the same features that Nero Burning ROM does—burn data on to everything ranging from CDs to Blu-Ray discs, burn ISO images, create Audio CDs and so on. The interface is a friendly drag-and-drop affair, so you don't have to be an expert to use it.

At just 2.8 MB, CDBurnerXP doesn't waste space with fancy features and concentrates on what it does best - burn discs. This is one solid, straightforward tool that'll prompt you to uninstall the bloatware that Nero's become.

Live life Zen like

Bhaskar Sarma

Sites that would make a difference in your life...

http://zenhabits.net

A typical office worker is stressed, anxious and jumpy. How many times have you got a severe panic attack when you realise that you have a report to write, with very little time left after a whole day spent surfing for cheap airline tickets! How many mornings have you wasted looking at your cluttered inbox while important work was pending?

If you identify yourself with these situations, then Zen Habits (**http://zenhabits.net**) is the blog for you. Filled to the brim with



One of the typical posts in Zen Habits

smart productivity tips, motivation hacks and health advice, thousands of people have turned to it for answers to lead more fulfilling lives. This blog takes its inspiration from the Getting Things Done principle and takes it to a whole new level. Some typical articles on the blog are "How to Actually Execute Your To-Do List", "How Not to Multi-task" and "How to Become a Vegetarian, the Easy Way". This blog also treats contentious issues related to family and day-to-day living. This site is highly recommended for those who want to improve their quality of life.

http://photojojo.com/

Readers of Photojojo swear by this axiom and have probably gotten great results by following its advice. Photojojo, is a photography related site, which dishes out advice on DIY projects, photo tips and equipment for the hobby and amateur photographer. Its USP is the way the material is presented—you feel like you are talking to a very enthusiastic friend, who is also very witty. While one day the site will discuss how to take great and abstract photos by throwing your camera in the air and keeping it at long exposure, another day will be a post that shows how to take great product photos for auction sites. The store sells different types of equipment like tripods, WiFi enabled memory cards and photo frames. It delivers a bi-weekly newsletter and the site's forum is a great place to get answers to your questions.

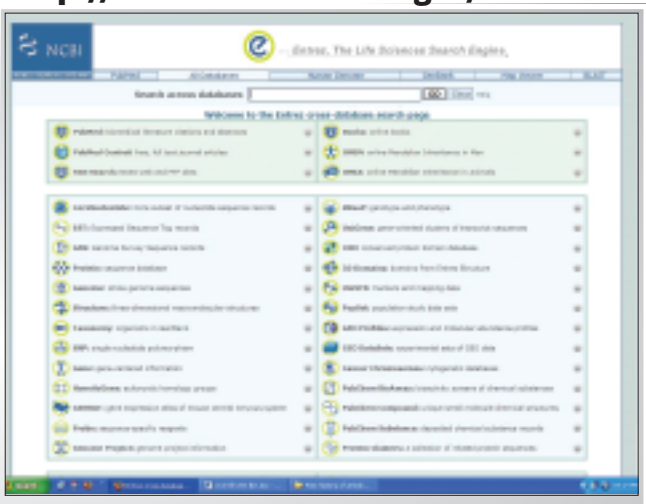


Social experiment with a cheap camera?

http://www.ncbi.nlm.nih.gov/PubMed

Before starting off, let us make note of one thing—this site will make sense to doctors and medical professionals. If you fit into the target demographic then you would be very interested. This Web site is owned by the US government and is a joint effort by US National Library of Medicine and the National Institutes of Health. It houses one of the largest databases of health related papers and books, and is accessible for free. The search engine can be used without any registration. However, you might want to register and sign up for a PubMed update, so you get an e-mail every time new material is uploaded to the database.

Even though we are not medicos, we decided to check out the archive. The Limits tab has plenty of checkboxes which can be used to narrow down your choice of papers or extracts. Other links lead users to hardcore databases like a complete collection of 3D macromolecular structures, genome sequences and eukaryotic homology groups. They have a separate page



A section of the resources on this page

for human genome resources as well as a map viewer related to genetic information of different species. Undoubtedly, a great place for researchers, students and doctors alike.

Agent 001

Digital Cameras

I've got a hankering for the perfect picture

One of my friends wanted a camera, and as luck would have it, I was on my way out to get one for a colleague when I got that call...

Previously, anyone wanting a digital camera would be pointed towards the *de facto* 5 to 7 megapixel camera with a 3x optical zoom. But needs differ, and vendors have done well to recognise this fact. Although the larger semi-professional DSLR cameras have always had a multitude of settings in their exhaustive and sometimes complicated menus, I've found compact cameras to lack many options—either in their menus or in terms of usability. The compact cameras today are another story. I did a little surfing and came up with quite a few cameras that were refreshingly different. There are the ultra zoom models—cameras with optical zoom (ignore digital zoom claims please) in the region of 6x to 12x, as well as some compacts with smaller zooms, but large resolution image sensors. Then there are the ultra compacts—about as big as the average cell phone.

Vendors will have you believe that Kodak, Fuji and Nikon are entry level or mid-range offerings—though this isn't true—probably because of the cheaper models they stock from these brands. One vendor told me, "People who want higher-end models usually ask for Canon or Sony, while those looking for a budget camera prefer Kodak and Nikon." My advice: ignore what vendors tell you—most of them really don't know what they're talking about. Before you go out and buy a camera, do your research, read our reviews and make up your own mind.

Among the ultra compacts, the first brand worth mentioning was Canon with their Digital IXUS series. The IXUS 800IS, 860IS, 900Ti and 950IS were all on display. The 800IS is based around a smaller 6 megapixel image sensor and priced at Rs 12,000, while the 950IS is based around a larger 8 megapixel sensor and priced at Rs 16,000. Both cameras sport an optical zoom of 4X—good for an ultra compact camera, but strictly ordinary for a regular digital camera. The more expensive SD 900Ti isn't necessarily a better camera with a 3x optical zoom and a macro shooting range of not less than 5 cm. Its selling point is the titanium body, which isn't worth it at Rs 18,000. The newer IXUS 860IS is available for Rs 15,500 and features a 3.8X optical zoom. Sony's T series of cameras is even more attractive. For one, they are tinier than Canon's offerings, and come in different colours. They also have all the features that some larger cameras lack—like the 5x optical zoom on the Cybershot T300 (10 MP) and T200 (8.1 MP). Both feature Sony's patented double anti-shake blur reduction, which is fancy handle for optical and digital image stabilisation systems that these cameras integrate. At Rs 18,000 for



the T300, and Rs 17,500 for the T200, these cameras vie for your cash. In addition, the T200 features a touch screen, something nifty to watch out for.

Among the entry-level cameras, Nikon's Coolpix L16 and L18 are available at Rs 6,000 and Rs 6,800, respectively. Both have 3X optical zooms, the former is a 7 megapixel camera, while the latter is rated at 8 megapixels. Kodak's C713 (7 megapixel, 3X optical zoom) is available at Rs 5,000 and should be the minimum you should settle for. Canon's A470 was also on display, 7 megapixels and a 3.4x optical zoom for Rs 5,500.

Among the ultra zoom models, Kodak's ZD710 (Rs 9000) is a spanking new model with a 7 megapixel sensor and a large 10X optical zoom. Even more capable is Canon's SX100IS, which also has a 10X zoom and a slightly larger sensor at 8 megapixels. Priced well at Rs 12,500, it also features image stabilisation, which is a plus when using such long zooms. The largest zoom-bearing model I could find was the Nikon P80, which astonishingly enough features a large 10 MP rated sensor and an 18X optical zoom. It's priced well at Rs 16,000.

Among the regular cameras Sony's W300 impressed me with its sleek titanium-coated body, and a whopping 13.6 megapixel sensor and 3X zoom. Priced at Rs 16,800, this camera is great for those looking for something compact yet powerful. The W200 (12.1 MP, 3X zoom, Rs 14,720) and W120 (7 MP, 4X zoom, Rs 9,000) were also on display although the latter (W120) isn't as impressively built as the other two. Nikon's P50 (8.1 MP, 3.6X zoom, Rs 8,800) was another well built, well laid-out camera and has a better grip for shooting than the flat, compact Sony's, but isn't as pocketable. The P5100 adds a larger sensor, that is, 10 MP to the P50. The zoom is identical, as is build quality, with a price of Rs 11,700. Olympus's FE310 is one of their entry level offerings with some impressive specifications at 8 MP, 5X zoom. It's priced extremely well at Rs 6,600. The only minus is Olympus' proprietary memory standard—xD cards. Canon's A720IS was on display—a successor to my now old A710IS. At Rs 10,400, and with an 8 MP sensor and 6X zoom, the A720IS is a well-built and well-balanced camera in terms of features and performance. A whopping 12 MP rated A650IS, also features a 6X zoom and is priced at Rs 14,000. This one also has a larger grip, a consequence of it requiring four AA batteries, rather than two, and features a swivel viewfinder display. The A580 (8 MP, 4X zoom) was priced at Rs 7,700 and the A590IS (8 MP, 4X zoom) was priced at Rs 8,600. Kodak's M893IS is a neat looking camera (8 MP, 3X zoom), but it's not as well built as some of the others.

I recommended the all round capabilities of the Canon Powershot SX100IS to my friend and he decided to pick it up for this price. My colleague at office decided he didn't want the extra zoom and went for the A720IS, another great all rounder. ⊠

agent001@thinkdigit.com

Ask Agent 001

Going Pro

Q I am buying a new PC. Which CPU is better–Quad-Core Q6600 (2.4 GHz) or Core 2 Duo E8500 (3.16 GHz)? What is the difference in performance of both? Please suggest a good motherboard and a good 3D solution also. I also need a good cabinet and power supply to go along with the rest of the system. My target is Hardcore Gaming and support Vista Ultimate, 3D photo and video editing, recent Linux OS like Ubuntu, Fedora, Mandrake etc.

Souvik Mukherjee

You haven't mentioned a budget for your PC. Also, since you seem a lot more interested in Linux than gaming, I'm assuming gaming takes second position to programming and such. Based on your needs, I'm recommending a configuration for you. Along with the components mentioned, I'm suggesting memory as well. As far as your query goes, a quad-core is meant for those who are heavily into multitasking. Very few applications that home PC users use are coded to utilise four cores properly, so a dual-core is enough for most users, and some applications that benefit from clock speed increments will do better on dual cores which traditionally have faster clocks than quad cores. For gaming dual cores are mostly faster except for a few of the latest games which are coded to take advantage of the two extra cores.

Basic Gaming PC

Component	Suggestion	Approx Price
Processor	Core 2 Duo E8400 (3.00 GHz)	Rs 9,000
Motherboard	Abit IP35-E Off Limits	Rs 5,000
RAM	2x1 GB DDR2 667 (Transcend)	Rs 1,950
Graphics Card	Gigabyte GeForce 8800GT	Rs 11,000
Hard Drive	Seagate 7200.10 250 GB	Rs 2,200
	Total Price	**Rs 29,150**

This configuration will give you a lot of processing power and a good graphics solution. In case you want more storage you could opt for a 500 GB hard drive for around Rs 3,900.

Best All-rounder

Q I am looking for a cellphone. My budget is around Rs 10-11,000. It must have a good camera, sound, screen, multimedia capabilities and almost everything. I have selected SE K790i, Nokia 5700, and Motorola MOTOROKR E6. Are there any better models other than these in the market? Which one do you recommend? Your recommendation is all that matters.

Nitish

I've used SEs K790i and have nothing but praise for the phone. It's got a good antenna that gives great voice clarity, battery life is good, and the screen is crisp and colourful. Music playback and camera quality are also top-notch. In comparison, the Nokia 5700 and Motorola E6 lag far behind. To add to the K790i's list of advantages its light and ultra compact. A cheaper option to the K790i is the K800i, which lacks EDGE support, which is useless for most people anyway. Expect to pay around Rs 10K for the K790i and Rs 8K for the K800i.

Ask Away!

Want a tech product, but don't know how to go about buying it? E-mail **agent001@thinkdigit.com** with your complete contact details, and he might answer them here! Please note that Agent001 only answers purchase-related questions in this space.

Rocking In The Budget World

Q Hi, I am a big fan of *Digit* and have been reading it since Standard 3. This is my first query letter to *Digit*. I want to buy a flash based MP3 player between Rs 8,000-12,000. I want decent playback quality, video support, easy user interface, FM, FM recording and voice recording capabilities. I would like one which looks nice. I do not want to buy an iPod. I have shortlisted the Cowon D2 and Creative Muvo T200 (don't ask why this). Is the Cowon D2 a good choice? If so what is its official price?

Dhiraj Agrawal

I'm curious to know why you do not want to buy an iPod. The iPod Touch is a great sounding, fully functional PMP. Of course, it's beyond your price range as well. The Cowon D2 is an amazing PMP. Great quality and what's more impressive is a vast array of features in addition to the ones you mentioned above. The great plus point being memory expansion via SD as 8 GB cards have become quite cheap. The D2 also has amazing battery life.

The last I checked the street price of the Cowon D2 was around Rs 9,000 for the 4 GB version. You can buy it eyes closed.

Overhaul!

Q I want to change my MSI 480 motherboard. Do the new AM2 boards support AMD Athlon 64 socket 939 processor or I have to replace the processor as well? Let me know my options along with the product available in the market.

Dipak Kumar Show

No, the new AM2 boards are 940 pin-based and support DDR2 RAM. So if you want to upgrade, you will not only be buying a new motherboard, but a new processor and memory as well. If you are buying all three components anyway, then I suggest you invest in an Intel-based system, as you'll get better bang for your buck. I'd recommend an Intel P35 chipset based board—look for the Abit IP35-E, available for Rs 5,000. For the processor look for a Core 2 Duo E2180 if you're looking for extreme value; if you want performance, look at the Core 2 Duo E8400 for Rs 9,000. I recommend 2 GB of DDR2 RAM—look for a frequency of 667 MHz. Brands to look at are Transcend and Kingston. Expect to pay around Rs 1,900 for 2 GB. If, however you're looking only to replace your motherboard and not your CPU or memory, take a look at NVIDIA's GeForce 6100 / 6150 based chipsets. Expect to pay up to Rs 3,000. ⊠



SECRETS THAT KEEP YOU AHEAD IN THE RACE

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WORD 2007

Quick Access Toolbar

There are certain commands you might want to add to the Quick Access Toolbar for easy access. For example, to add the Date & Time command:

1. Click the `Customize Quick Access Toolbar` button to the right of the Office button and choose `More Commands`.
2. In the `Choose Commands From` drop down, select `All Commands`.
3. Choose Date & Time and click Add. Click OK to add a `Date & Time` button to the Quick Access toolbar; you can add other commands in a similar fashion as well.

Compare Documents

You can use Word's synchronous scroll to compare two documents:

1. Open both the documents
2. In the `View` Tab, choose `View Side By Side` under `Window`; both documents will be displayed side by side. If you want to view the documents horizontally instead, choose `Arrange All`.
3. To scroll the two documents together, choose Synchonous Scroll under Window in any of the windows.

Automatically Select Words

When selecting text from middle of a word (usually to delete), Word 2007 automatically selects the whole word and this extra-helpful feature tends to be an annoyance. Here's how you put an end to it.

1. Click on the Office button and choose Word Options.
2. In the list of options, choose Advanced in the left hand column
3. Deselect the `Automatically select entire word` check box

Turn Off Paste Options

If you Copy-Paste information in Word a small dynamic Paste Option menu appears next to the just pasted information, it distracts many but thankfully can be turned off.

1. Click on the Office button and choose `Word Options`.
2. In the list of options choose Advanced in the left hand column
3. Scroll through the various options until you get to the `Cut, Copy, Paste,` section.
4. Deselect `Show past Options Button`

Controlling The Smart Cut And Paste Feature

When copy-pasting any information into a document, we unknowingly add or remove spaces. For such situations the smart Cut and Paste feature comes handy. It needs to be turned on.

1. Click on the Office button and choose `Word Options`.
2. In the list of options choose Advanced in the left hand column
3. Scroll through the various options until you get to the `Cut, Copy, Paste`, section.
4. Select the `Use Smart Cut and Paste` check box to turn it on.
5. You can tweak it further to your liking by clicking on the `Settings` button

Creating A Proper Registered Trademark Symbol

The registered trademark symbol can be generated in Word by typing in (r)—however, the resultant mark isn't superscripted. To do so, follow these steps:

1. Highlight the registered trademark symbol that results after (r).
2. Press `[Ctrl] + [Shift] + [+]`. This will superscript the mark
3. Now click the Office button and then choose `Word Options`.
4. In the left hand column select `Proofing` and select the `AutoCorrect Options` button. Word will display the AutoCorrect tab of AutoCorrect dialog box.
5. In the Replace box, type `(r)` and the with box should already be filled with the registered trade mark symbol in the first if you had selected it in step 1
6. Make sure the `Formatted Text` option is selected
7. Click `Replace`. Word will ask if you want to replace existing AutoCorrect definitions. Click `Yes`; the old definition will be replaced.

Using A Non-breaking Hyphen

When Word 2007 calculates line length it tries to break the line and wrap it to next line on a space or hyphen. However, sometimes you might not want it to wrap at a hyphen—for example, with telephone numbers. Using a non-breaking hyphen is the key—here's how:

To create a non-breaking hyphen, press `[Ctrl] + [Shift] + [-]` instead of just the hyphen.

Limiting Edits To Comments

Any document can be protected by making it read-only and adding a password. However, when you have group of people reviewing the document, they should be able to add comments, at least. Here's how to do it:

1. Under the `Review` Tab, choose the `Protect Document` tool. Word displays the protect document pane at the right side of your document
2. In the `Editing restrictions` section of the pane, choose `Allow Only This Type of Editing in the Document`. Once done, Word will enable a drop-down list
3. Using the drop down list, choose `Comments`. Select `Yes, start using Enforcing Protection`. This will prompt the `Enforcing Protection` dialog box.
4. Enter a password in the box, Click `OK` and save the file as Normal.

Inserting Files

There may be a need when you have to add a file to the current document or append a document in the middle of your document. This can be achieved in the following manner:

1. Position the cursor where you want the other file to be inserted.
2. Select the `Insert` tab on the Ribbon and in the `Text` group, click the down-arrow to the right of the `Object` tool.
3. Choose the `Text from File` option, which will open the `Insert File` dialog box.
4. Select the file you want to insert and click on `OK`.

Formatting Inconsistencies (Blue Underline)

Word has its ways of error notifications by way of marking errors with underlines—Red for spelling mistakes, Green for grammatical mistakes and Blue for formatting inconsistencies. While the first you are important the third might not be for most of us. There is a way to stop them, here's how.

1. Click the Office button and then choose `Word Options`.
2. Click `Advanced` in the left hand column and scroll to the `Editing Options` section. Deselect `Mark Formatting Inconsistencies` and click Ok.

Putting Borders

You can add borders to your paragraph or if need be to one entire page. Follow these steps to do it.

1. If you are not planning to add borders to all pages in your document then position the cursor on the part which will use borders
2. Go to the `Page Layout` tab of the Ribbon and choose `Page Borders` under the `Page Background` group. It will open the border and shading dialog box
3. Use the controls in the dialog box to specify the border appearance. You can also apply artistic borders using the `Art` drop down list.
4. Use the `Apply To` drop down list to select what parts of the document should use borders and click `OK`.

Microsoft Word 2007 Shortcuts

Ribbon Shortcuts

Key combination	Function
[Alt]+[F]	Office Button
[Alt]+[H]	Home tab
[Alt]+[N]	Insert tab
[Alt]+[P]	Page Layout tab
[Alt]+[S]	References tab
[Alt]+[M]	Mailings tab
[Alt]+[R]	Review tab
[Alt]+[V]	View tab
[Alt]+[L]	Developer tab

Function key Shortcuts

[F1]	Invoke help system
[Shift]+[F1]	Context-sensitive help or reveal formatting
[Alt]+[F1]	Next field
[Shift]+[Alt]+[F1]	Previous field
[Ctrl]+[Alt]+[F1]	Display Microsoft System Information
[F2]	Move selection
[Shift]+[F2]	Copy selection
[Ctrl]+[F2]	Print Preview
[Shift]+[Alt]+[F2]	Save
[Ctrl]+[Alt]+[F2]	Open
[Shift]+[F3]	Change case of selection
[Ctrl]+[F3]	Cut selection to the Spike
[Alt]+[F3]	Create a Building Block entry
[Shift]+[Ctrl]+[F3]	Paste information from the Spike
[F4]	Repeat last action
[Shift]+[F4]	Repeat last Find or Go To operation
[Ctrl]+[F4]	Close window
[Alt]+[F4]	Quit
[Shift]+[Alt]+[F4]	Quit
[F5]	Go To
[Shift]+[F5]	Return to last edit location
[Alt]+[F5]	Restore program window size
[Shift]+[Ctrl]+[F5]	Edit bookmark
[F6]	Next pane
[Shift]+[F6]	Previous pane
[Ctrl]+[F6]	Next window
[Alt]+[F6]	Switch between dialog box and document
[Shift]+[Ctrl]+[F6]	Previous window
[Shift]+[Alt]+[F6]	Previous window
[F7]	Spell check
[Shift]+[F7]	Thesaurus
[Alt]+[F7]	Select next spelling error and display Context menu
[Shift]+[Ctrl]+[F7]	Update links
[Shift]+[Alt]+[F7]	Display Research task pane
[F8]	Extend selection
[Shift]+[F8]	Collapse selection (not assigned)
[Ctrl]+[F8]	Display Macros dialog box
[Alt]+[F8]	Start COL selection mode
[Shift]+[Ctrl]+[F8]	
[F9]	Update fields
[Shift]+[F9]	Toggle display of field code or results
[Ctrl]+[F9]	Insert field code braces
[Alt]+[F9]	Toggle display of all field codes or results
[Shift]+[Ctrl]+[F9]	Convert field to regular text
[Shift]+[Alt]+[F9]	Run GOTOBUTTON or MACROBUTTON from a field
[F10]	Show KeyTips
[Shift]+[F10]	Display Context menu
[Ctrl]+[F10]	Maximize document window
[Alt]+[F10]	Maximize program window
[Shift]+[Alt]+[F10]	Control Smart Tags
[F11]	Next field
[Shift]+[F11]	Previous field
[Ctrl]+[F11]	Lock a field
[Alt]+[F11]	Display VBA editor
[Shift]+[Ctrl]+[F11]	Unlock a field
[F12]	Save As
[Shift]+[F12]	Save
[Ctrl]+[F12]	Open
[Shift]+[Ctrl]+[F12]	Print

Adding Sound To A Document

At times you may feel the need to add multimedia to you document and it is possible to add sound files to the document; here's how.

1. Position your cursor at the point where you want to insert a sound file.
2. Go to the `Insert` Tab of the Ribbon and click `Object` in the `Text` group. This will open the `Object` dialog box.
3. Browse and select the sound file to be inserted and click `OK`. A Speaker icon will appear at the insertion point.
4. To listen to the sound, double-click the speaker icon.

FIREFOX 3

Know Where You're Going

You can set Firefox to tell you when the site you're viewing redirects to another site—sometimes you may end up far from where you want to be. To enable this, go to `Tools > Options` (or `Edit > Preferences` if you're using Linux) `> Advanced`. Under `General`, check the box against `Warn me when sites try to redirect or reload the page`. Henceforth, you'll get a warning bar every time a site redirects you.

Create Your Own Smart Bookmarks

Firefox keeps a record of sites you visit often, and generates a list of "Smart Bookmarks" that you can access from the Bookmarks toolbar. You can create your own list of smart bookmarks using custom queries instead of URLs as well. Right-click on the Bookmarks toolbar and choose `New Bookmark`. Use a descriptive name for the bookmark, and under `Location`, enter one of the queries below (whichever suits your fancy, or tweak them to get the results you want):

●For your 10 Most Visited Sites:
`place:queryType=0&sort=8&maxResults=10`
●For your 10 Most Recent Bookmarks:
`place:queryType=1&sort=12&maxResults=10`
●For your 10 Most Visited Sites with "thinkdigit" in them:
`place:queryType=0&sort=8&maxResults=10&terms=thinkdigit`

Here's all the information you need to build these queries:

sort options
0—Natural bookmark order
1—Sort by title, A-Z
2—Sort by title, Z-A
3—Sort by visit date, most recent last
4—Sort by visit date, most recent first
5—Sort by URI, A-Z
6—Sort by URI, Z-A
7—Sort by visit count, ascending
8—Sort by visit count, descending
9—Sort by keyword, A-Z
10—Sort by keyword, Z-A
11—Sort by date added, most recent last
12—Sort by date added, most recent first
13—Sort by last modified date, most recent last
14—Sort by last modified date, most recent first
17—Sort by tags, ascending
18—Sort by tags, descending
19—Sort by annotation, ascending
20—Sort by annotation, descending

queryType options
0—Search only History
1—Search only Bookmarks
2—Search both

maxResults is the maximum number of results you want.

Tag Your Bookmarks

While we're on the subject of bookmarks, you should also know that when you create a new bookmark, you now have the option to tag it—you could tag bookmarks relating to your upcoming holiday with "Monsoon Trip", for example. Make sure you separate each tag with a comma. Now, when you type a tag into Firefox's address bar, the bookmarks with that tag will come at the top of the list.

Find Faster

Instead of using `[Ctrl] + [F]` to find a word in a page, you can use Firefox 3's new Quick Find to search within a page—just hit `[/]` to begin. You can also eliminate this step by enabling Type Ahead Find. To enable it, type `about:config` in the address bar, and in the configuration page, look for `accessibility.typeaheadfind`. Double-click on it to set it to `True`. Now, to search for a word in a page, just start typing it, and quick find will find it for you. If you only want to look for links, also enable `accessibility.typeaheadfind.linksonly` (if you prefer using a shortcut instead of this, hit `[']` to start Quick Finding links). When Quick Find has found your link, just hit `[Enter]` to visit it.

Richer Results?

When you begin typing in Firefox's address bar, the results are a lot smarter than just a list of previously visited sites. To increase the number of these smart (or rich, as they're called) results, open `about:config` in a new tab, and use the filter to search for `browser.urlbar.maxRichResults` double-click on it to change the value to anything you want.

Delete Meaningless Results

If you've mistyped a URL and visited it, Firefox will still bring it up in your rich results—clearly, you don't want that happening. To get rid of the entry, enter the URL till you see the one you don't want, use the down arrow to select it and hit `[Delete]` (on the Mac, you'll need to use `[Shift] + [Delete]`). You'll never see that URL in your rich results again.

Ring In The Old

If you don't like Firefox's rich results (displayed in what is actually called the AwesomeBar), you can use the Oldbar extension (**https://addons.mozilla.org/en-US/firefox/addon/6227**) to get back to the old "URLs only" address bar.



Get the old Firefox address bar back

Gmail For mailto: Links

The ability to assign *protocol handlers* programs that'll accept links from different protocols like ftp, mailto and so on—isn't new, but thanks to Google's love for Firefox, you can now assign Gmail as the default e-mail handler for mailto: links. Open Gmail in a new tab. In this same tab, enter this JavaScript snippet: `javascript:window.navigator.registerProtocolHandler("mailto","https://mail.google.com/mail/?extsrc=mailto&url=%s","Gmail")`. You'll see a warning bar at the top of the page, asking you whether you want to add Gmail as the default mailto handler. Select `Add Application`, and you're done!

Time Lapse Photography

A quick, straightforward method to get time lapse photography

There are many tricks and experiments that can be done with digital cameras, and time lapse is one of them. Time lapse photography is great fun—capturing a time frame using single photos taken at intervals. All these frames are put together to create a short video clip. You don't need any high-end equipment to do this either—just a digital camera and a few free applications here and there. You also need patience and you need to be specific.

The Requirements

Getting to the specifics, you require a digital camera for capturing the images. You also need a tripod preferably, or a good stationary platform where you can keep your camera for a very long period. You need to download the latest version of VirtualDub (**www.virtualdub.org**). We'll be using it to encode the final video. You'll also need suitable codecs such as Xvid or x264 installed on your PC. If you wish to give your photos a slightly different treatment, then an image editor such as GIMP or even Photoshop will add sparkle to it.

I'm Equipped...Now What?

First select a target object you want to take the time lapse photo shoot of. It could be anything—a busy street, a blooming flower or even a lunar eclipse. Place the camera on the tripod or on a table at a suitable distance from the target you are shooting. Be extremely careful—you must not move the camera from that position at all. Remember that the camera has to be in that position for a really long period, so you shouldn't be doing a shoot like this on a rainy day.

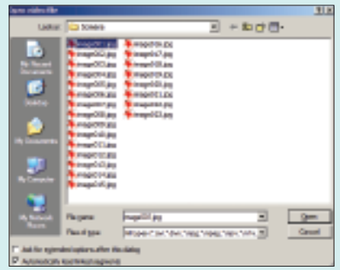
Setting An Interval

Depending on the type of object of the time lapse shoot, you need to decide an interval, after which the followings shots will be taken. A time lapse of a flower blooming in the morning could happen in 5 hours, for example, so you need a sufficient number of frames to make up a good length time lapse. For a good five second time lapse shot, you would need a good 125 to 150 separate photos if you want a video with a frame rate of 30 fps. In this case, you would need to take a photo every 2 minutes of the object.

Once that is decided, turn on the camera's image stabilisation feature and use a two-second timer to prevent any shake that might occur with you press the trigger. Now it's just a matter of time and patience and clicking the photos in time after every two minutes. Make sure you have a sufficiently large memory card and the battery fully charged so you don't have to disturb the camera anytime. Remember, you don't need to take photos at 8 MP resolutions. Anything up to 3 MP should be good enough—the final result is going to be a video, not a slideshow. Don't change any settings between photos.

Creating The Time lapse Itself

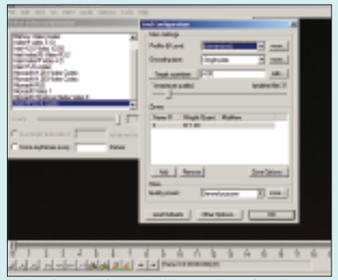
Once the shoot is done, copy all the images from the camera to a single folder on the computer. Make sure to delete all previous photos taken on the camera. At this point, you can use Photoshop to adjust or fix any photos that might have shifted.



Importing the entire sequence of images into VirtualDub

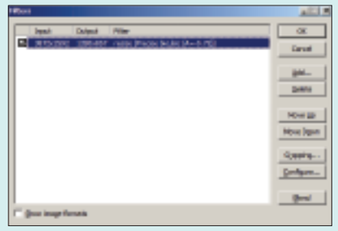
From here on, things get really simple. Open VirtualDub up and click on `File > Open Video File`. Make sure the checkbox for `Automatically load linked segments` is checked. Browse to the folder where the photos are stored and choose the first image of the sequence. Click on `Open`. Just be sure that the images are numbered properly.

Creating The Video



Selecting audio and video codecs for the movie

With the sequence video imported into VirtualDub, its time to select the codec we want to use to export the video. Click on `Video > Compression` and then select a codec from the list. If you have Xvid, select it and choose the quality or bitrates at which you want the video encoded. If you want a short audio clip, you can add it by clicking on the Audio menu and then on Audio from other file. Select the file and click Open. You can also add some basic effects in VirtualDub by clicking `Video > Filters`. When you are happy with the clip, click on `File > Save as AVI`. Choose a location and click on `Save`.



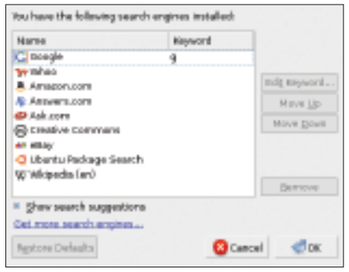
Filters and effects can be added to enhance the video

A quick search for the keywords 'time lapse' in YouTube will show up several examples of people trying it with their own digital camera. Along with some very interesting time lapse sequences, you'll be shocked to find time lapse videos with people who have been taking photos of themselves everyday over a couple of years.

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Opera-like Searching

When you type a search term in Firefox's address bar, you'll either get an error or be taken to the "I'm feeling lucky" Google result for that term. It's annoying that you'd have to change focus to the search box, when both Opera and IE support searching from the address bar itself—in Opera, you can precede the search term with "g" to use Google, "y" to use Yahoo, and so on. To get this in Firefox, first click on the arrow next to the search engine's icon in the search box and choose `Manage Search Engines`. Select a search engine and choose `Edit Keyword`. Enter a keyword of your choice—"g" for Google, for example—and click `OK`. From now on, when you precede any search term with "g" in the address bar, Firefox will send you to the Google results for that term. Repeat for all other search engines.



Add keywords for search engines

Don't Zoom The Images

When you hold down `[Ctrl]` and scroll the mouse wheel to zoom into pages, you might not want images to resize and get distorted just so you can read text a little better. To enlarge only text, go to `View > Zoom` and choose `Zoom Text Only`.

Resistance Is Futile

It's no coincidence that Firefox 3's new mascot is a robot. You see, Firefox wasn't created by humans! Just type about:robots in the address bar to find a secret message from the creators. They claim they come in peace, but we know better...

EXCEL 2007

Adding Due Date Alerts

We all use Excel for keeping track of personal finance—paying bills, for instance—wouldn't it be great if Excel could alert you of an approaching due date? Here's how you do it:

1. Select the cell that contains the due date and go to the `Home` tab.
2. Click the `Conditional Formatting` option in the `Styles` group and choose `Manage Rules`. This will invoke the `Rules Manager` dialog box.
3. Click on the `New Rule` button
4. Choose `Format Only Cells that Contain`
5. In the `Edit the Rule Description` area, make sure the first drop down list has `Cell Value`. The second drop down should be set to `Less Than`
6. In the formula area enter `=Today()+7`
7. Click the `Format` button and in the colour drop down choose any colour you like.
8. Here, if the due date is within the next seven days, it changes to the colour you chose. You can create one more rule and replace the formula with `Today()` and changing the colour to say Red, so if the date is past due it will appear red.

Changing Gridline Colours

Firefox Keyboard Shortcuts

Command	Shortcut
Navigation	
Back	[Alt] + Left Arrow [Backspace]
Forward	[Alt] + Right Arrow [Shift] + [Backspace]
Home	[Alt] + [Home]
Open File	[Ctrl]+[O]
Reload	[F5] [Ctrl] + [R]
Reload (override cache)	[Ctrl] + [F5] [Ctrl] + [Shift] + [R]
Stop	[Esc]
Search	
Find	[Ctrl] + [F]
Find Again	[F3] [Ctrl] + [G]
Find As You Type Link	[']
Find As You Type Text	[/]
Find Previous	[Shift] + [F3]
Web Search	[Ctrl + [K] [Ctrl] + [E]
Windows And Tabs	
Close Tab	[Ctrl] + [W] [Ctrl] + [F4]
Close Window	[Ctrl] + [Shift] + [W] [Alt] + [F4]
Move Current Tab Left	[Ctrl] + Left Arrow [Ctrl] + Up Arrow
Move Current Tab Right	[Ctrl] + Right Arrow [Ctrl] + Down Arrow
Move Current Tab to Beginning	[Ctrl] + [Home]
Move Current Tab to End	[Ctrl] + [End]
New Tab	[Ctrl] + [T]
New Window	[Ctrl] + [N]
Next Tab	[Ctrl] + [Tab] [Ctrl] + [Page Down]
Open Address in New Tab (from Location or Search Bar)	[Alt] + [Enter]
Previous Tab	[Ctrl] + [Shift] + [Tab] [Ctrl] + [Page Up]
Undo Close Tab	Ctrl+Shift+T
Select Tab (1 to 8)	[Ctrl] + [1] to [8]
Select Last Tab	[Ctrl] + [9]
Miscellaneous	
Complete .com Address	[Ctrl] + [Enter]
Complete .net Address	[Shift] + [Enter]
Complete .org Address	[Ctrl] + [Shift] + [Enter]
Delete Autocomplete Entry	[Delete]
Full Screen	[F11]
Select Location Bar	[Alt] + [D] [Ctrl + [L]
Select Search Engines (when Search Bar is focused)	[Alt] + Up Arrow [Alt] + Down Arrow [F4]

HOW TO

Block Ads Now!

Closing the gate to sneaky ads no matter what the browser

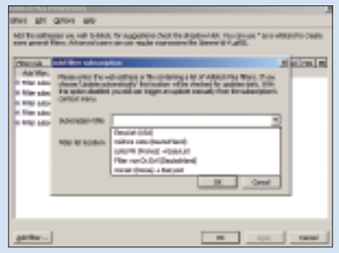
Advertisements are annoying to all of us. They do create revenue for sites, but most of the time , they are of little importance to the user and all they do is nibble away at your bandwidth. Sometimes, they can show inappropriate content as well. We are going to look at ways to disable or at least hide the ads off the screen with pretty much any of the most used browsers.

Ad Blocking In Firefox

Ads come in all forms and popups are one of the most annoying ways of which ads make their way on to the screen. Firefox, like most other browsers today, stops popups from appearing on the screen.

For blocking of advertisements, there is an extremely useful and well known add-on called Adblock Plus. Get it from **http://adblockplus.org/en/**. Click on the `Installation` link to go to that page to download the add-on. You have to click on the Allow button on the right top of the Firefox window to permit the add-on to be downloaded and installed. Restart Firefox.

Once Firefox starts, choose `Tools > Add-ons`. Click on `Options` for the



Adding subscriptions to Adblock Plus

Adblock Plus add-on. Click on `Filter > Add filter subscription`. Use the dropdown for `Subscription` title and choose the lists you want to add and click `OK`. Follow the steps to add additional subscriptions. Once added, click on `Filters > Update` all subscriptions. Click `OK`.

Ads should now be blocked by Firefox, and even if you do find some ads that do make their way through the filters, right click on the image of the ad and click `Adblock image...`

Flash elements can also be disabled by using the Flashblock add-on for Firefox. This can be downloaded and installed from **http://flashblock.mozdev.org**. Flash elements will only work when you click on them.

Ad Blocking In Opera

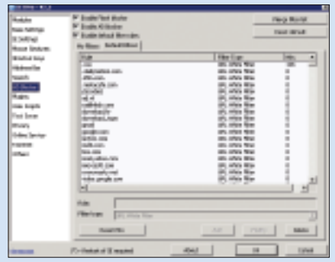
Opera has a built in popup blocker and an ad blocking feature as well. Using the ad blocker is as simple as downloading a text file and putting in the right folder. Opera's ad blocking works by referring to a file called `url-filter.ini`. There are many users who keep regularly maintained lists of ad hosts and domains.

One of the most famous one and most used ones is Fanboy's Adblock List (`www.fanboy.co.nz/adblock/`) Click on the Install now link or visit `http://fanboy.co.nz/adblock/opera/urlfilter.ini`. Save the file as it is to a folder and then move it to `C:\Documents and Settings\Your_User_ID\Application Data\Opera_folder\profile`. Linux users must copy to the `.opera` folder. When done, restart the browser and ad blocking will be enabled. Visit the site from time to time to update your ad block list.

Ad Blocking In Internet Explorer

Internet Explorer has been heavily criticized for letting popups and ads run loose but it too has a 3rd party add-on that users can download. It is called IE7Pro and can be downloaded from **www.ie7pro.com**. Click on the `Download Free`, download the installer and run it. In the last few steps of the installation you will be asked whether you want to enable spellchecking and if you want to set EasyHome as your homepage. Uncheck the boxes if you don't. Click `Next` and finish the installation.

Restart Internet Explorer and you will find an IE7Pro icon in the status



IE7Pro blocks ads and adds several other useful features missing in Internet Explorer

bar below or a button for `IE7Pro Preferences` in the toolbar above. Click it and then on `AD Blocker`. Enable `Flash blocker` to block flash items from web pages. You can also add your own filters in the `My Filters` tab. IE7Pro brings many more features than just ad blocking to Internet Explorer. Prefetching and mouse gestures are just some of these few features.

Universal Ad Blocking Across Windows

Ads can also be blocked across all browsers and applications running in Windows. This is done through a file called `HOSTS` that is located in `C:\WINDOWS\system32\drivers\etc`. Like the `urlfilter.ini` list that was used for Opera, similar lists are available for Windows. The list redirects domains to other domains or IPs. This way, none of the ads can be downloaded to your browser. Manual entries can be made by opening the file in a text editor. If you download a HOSTS file, copy it to the path mentioned above.

It is also a good idea to also have a spyware removal utility installed—they not only block ads, but malware and trojans as well. Spybot (**www.safer-networking.org**) for example is one of such software. Keep it updated and run it from time to time and keep safe distance from possibly dodgy links and your PC should be just fine!

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By default, the gridlines are a boring gray, and some people might want to change the colour to, say, black or blue. This how it is done:

1. Click the Office button and choose `Excel Options`.
2. Click `Advanced` in the left column and scroll through the right list until you see the `Display` options.
3. Ensure the `Show Gridline` check box is selected. Then using the `Gridline Color` drop-down list, choose the colour you want to use and click `OK`.
4. When you want to hide the gridlines you can simply deselect the `Show Gridline` check box

Don't Recalculate Now

When you change any cell in a worksheet, Excel automatically recalculates the whole worksheet to keep it up to date. But if you have a huge worksheet or terribly slow computer, this behaviour will hog more time to calculate than to enter data. One way to get over it is to change the default behaviour to manual worksheet calculation:

1. Click Office button and choose `Excel Options`
2. In the left side column, click on `Formulas` and scroll to Calculation Options in the right side column.
3. Select the `Manual` radio button which ensures the workbook calculation is done manually.
4. Click `OK` to complete. For manual calculation, hit `[F9]` for the final changes to reflect in the workbook.

Error Checking

Excel checks each workbook for errors of various kinds and these settings can be altered if you like.

1. Click on the `Office` button, then click the and choose `Excel Options`
2. In the left side column, click on `Formulas` and select `Enable Background Error Checking`
3. You can select or deselect the rules in the `Error Checking Rules` area as per your needs

Changing [Enter] Behaviour

Normally, when you hit `[Enter]` in Excel, the cursor moves down but you can change that behaviour. This tip comes handy when your Excel work spans horizontally and not vertically.

1. Click on the Office button and choose `Excel Options` to open the Options dialog box.
2. In the left side column, select `Advanced` and look for `Editing Options`.
3. The first option in `Editing Options` section of the dialog box determines whether the cursor should move or not, if you select `Move Selection`.
4. Then select `After Pressing Enter Move selection` and select the appropriate direction in the drop-down menu.

Displaying Full Screen

There may be times when you want to see as much of the spreadsheet as possible. Switching to full-screen mode is a good option and can be used as an add-on to zooming.

In the `View` tab on the Ribbon, select `Full Screen` in the `Workbook View` section. When done, simply click the on-screen button to restore or press `[Esc]`.

Viewing Multiple Worksheets At The Same Time

At times you might have to view different worksheets of the same workbook simultaneously—this can be achieved by a small trick as soon below.

1. Open a single workbook.
2. Go to the `View` tab and choose `New Window` under `Window`. Excel will open the same workbook in another new window.
3. Now, on the `View` Tab of the ribbon, click `Arrange All` in the window group and arrange both the windows to your liking.
4. In each window, select a different worksheet to view them together.

Saving With A Thumbnail

When you use the open dialog box to open any Excel workbook, some files display a preview of the workbook and some don't. If you want all your Excel files to show a preview you need to save the preview when closing the file. Here's how:

1. First open the workbook and select `Office > Prepare > Properties`. Excel will display some of the workbook's properties.
2. Click the `Document Properties` drop-down list (found at top-left corner of the visible properties) and choose `Advanced`. Here, make sure the `Summary` tab is selected.
3. Select the `Save thumbnails for all Excel Workbooks` check box and click `OK` to close the properties dialog box.

Cycling Through Font Colours

Excel provides a tool you can use to cycle though the available font colours. Though it isn't provided by default, you can add it to the Quick Access toolbar.

1. Click on the Office button and choose `Excel Options`.
2. Click the `Customize` option in the left side column and in the `Choose Command From` drop-down list select `Commands not in Ribbon`.
3. In the list of commands select `Cycle Font Colour` tool and click the add button to add it to the right hand side dialog box.
4. The `Cycle Font Colour` tool will be available on the Quick Access toolbar.

Finding Cells By Colour

This can be achieved with the simple find and replace dialog box. This is how it is done;

1. Press `[Ctrl] + [F]` to invoke the `Find & Replace` dialog box and then select the find tab.
2. With nothing in the `Find What` box, click on the Format button, which will open the format dialog box.
3. In the `Format` dialog box, go to the `Fill` tab and then select the appropriate colour.
4. Click on `OK` to close the `Format` dialog and then choose `Find All`. The address of all the cells with that particular colour will be listed in the find and replace box.
5. Select one and then press `[Ctrl] + [A]` to select all other similar coloured cells.

Bet You Didn't Know

We all love Opera's speed dial—quick shortcuts to up to nine of your favourite Web sites. It was a feature in Opera Mini, and you'd use a button on your keypad to select one of these sites. On the PC, however, there's no reason you should be limited to nine options, though. To add more rows and columns to Opera's speed dial, navigate to `C:\Documents and Settings\[username]\Application Data\Opera\Opera` and open `speeddial.ini` in a text editor. Add these lines at the top:

```
[Size]
Rows=3
Columns=4
```

(or anything you prefer)

Indent Cell Contents

There might be time when you need to indent contents in a cell—like when putting down things below a main heading. The easy way is to insert spaces, but it's just tacky. Here's how you indent right:

1. Select the cells you want to format.
2. Click the small icon at the bottom right in the `Alignment` group on the `Home` tab. This will invoke the Format cells dialog box
3. In the horizontal drop-down list select `Left (Indent)` or `Right (Indent)`, depending on how you want to indent.

Protecting Worksheet Names

In a collaborative environment where workbooks are shared, you might want to protect worksheet names. Here's how:

1. In the `Review` tab, choose `Protect workbook` in the `Changes` group. This will open the `Protect Structure and Windows` dialog box.
2. Select the `Structure` check box and enter a password in the `Password` box.
3. Click on `OK`. Excel will prompt to re-enter the password; do so.

Sort Data In A Protected Worksheet

Once you protect a worksheet, Excel stops users from executing variety of tasks on the worksheet data. You can still allow you colleagues to do some basic operations and yet have the sheet protected:

1. Under the `Review` tab, select `Protect Sheet`.
2. At the bottom of the dialog box you will see long list of check boxes. Checking each box will allow the user that particular operation. This way, you can specify what all functions the users are permitted to perform on the worksheet.

Excel 2007 Shortcuts

Shortcut	Result
[Ctrl] + [Shift] + [(]	Unhides any hidden rows within the selection.
[Ctrl] + [Shift] + [)]	Unhides any hidden columns within the selection.
[Ctrl] + [Shift] + [&]	Applies the outline border to the selected cells.
[Ctrl] + [Shift] + [-]	Removes the outline border from the selected cells.
[Ctrl] + [Shift] + [~]	Applies the General number format.
[Ctrl] + [Shift] + [$]	Applies the Currency format with two decimal places (negative numbers in parentheses).
[Ctrl] + [Shift] + [%]	Applies the Percentage format with no decimal places.
[Ctrl] + [Shift] + [^]	Applies the Exponential number format with two decimal places.
[Ctrl] + [Shift] + [#]	Applies the Date format with the day, month, and year.
[Ctrl] + [Shift] + [@]	Applies the Time format with the hour and minute, and AM or PM.
[Ctrl] + [Shift] + [!]	Applies the Number format with two decimal places, thousands separator, and minus sign (-) for negative values.
[Ctrl] + [Shift] + [*]	Selects the current region around the active cell (the data area enclosed by blank rows and blank columns).
[Ctrl] + [Shift] + [:]	Enters the current time.
[Ctrl] + [Shift] + ["]	Copies the value from the cell above the active cell into the cell or the Formula Bar.
[Ctrl] + [Shift] + [+]	Displays the Insert dialog box to insert blank cells.
[Ctrl] + [-]	Displays the Delete dialog box to delete the selected cells.
[Ctrl] + [;]	Enters the current date.
[Ctrl] + [`]	Alternates between displaying cell values and displaying formulas in the worksheet.
[Ctrl] + [']	Copies a formula from the cell above the active cell into the cell or the Formula Bar.
[Ctrl] + [1]	Displays the Format Cells dialog box.
[Ctrl] + [2]	Applies or removes bold formatting.
[Ctrl] + [3]	Applies or removes italic formatting.
[Ctrl] + [4]	Applies or removes underlining.
[Ctrl] + [5]	Applies or removes strikethrough.
[Ctrl] + [6]	Alternates between hiding objects, displaying objects, and displaying placeholders for objects.
[Ctrl] + [8]	Displays or hides the outline symbols.
[Ctrl] + [9]	Hides the selected rows.
[Ctrl] + [0]	Hides the selected columns.
[Ctrl] + [A]	Selects the entire worksheet. If the worksheet contains data, [Ctrl] + [A selects the current region. Pressing [Ctrl] + [A a second time selects the current region and its summary rows. Pressing [Ctrl] + [A a third time selects the entire worksheet.
[Ctrl] + [B]	Applies or removes bold formatting.
[Ctrl] + [C]	Copies the selected cells.
[Ctrl] + [D]	Uses the Fill Down command to copy the contents and format of the topmost cell of a selected range into the cells below.
[Ctrl] + [F]	Displays the Find and Replace dialog box, with the Find tab selected.
[Ctrl] + [G]	Displays the Go To dialog box. F5 also displays this dialog box.
[Ctrl] + [H]	Displays the Find and Replace dialog box, with the Replace tab selected.
[Ctrl] + [I]	Applies or removes italic formatting.
[Ctrl] + [K]	Displays the Insert Hyperlink dialog box for new hyperlinks or the Edit Hyperlink dialog box for selected existing hyperlinks.
[Ctrl] + [N]	Creates a new, blank workbook.
[Ctrl] + [O]	Displays the Open dialog box to open or find a file.
[Ctrl] + [P]	Displays the Print dialog box.
[Ctrl] + [S]	Saves the active file with its current file name, location, and file format.
[Ctrl] + [T]	Displays the Create Table dialog box.
[Ctrl] + [U]	Applies or removes underlining.
[Ctrl] + [W]	Closes the selected workbook window.
[Ctrl] + [X]	Cuts the selected cells.
[Ctrl] + [Y]	Repeats the last command or action, if possible.
[Ctrl] + [Z]	Uses the Undo command to reverse the last command or to delete the last entry that you typed.

Bazaar

We test the latest hardware and software products available in the market



Zotac GeForce GTX 280 AMP!

The New Big Daddy

The Geforce 9 had a really short stay and NVIDIA has released the GTX 280, around the same time that ATI launched their first card.

Zotac was the first to send us their over-clocked version of the GTX 280 that they proudly call the GTX 280 AMP! These new cards are crossing uncharted territories. The Zotac GTX 280 AMP! runs at a core speed of 700 MHz instead of the default 602 MHz. Most numbers on the new card have been doubled from what was on the last 9800GTX. The memory bandwidth has been increased to 512 bit and there is 1 GB of memory on the card. An 8-pin and 6-pin power connector is required to power the GTX 280 AMP!

It's just not all about the numbers. The GTX 280 absolutely destroys all previous records held by single cards. To give you an idea, the Zotac GTX 280 AMP! is about 50 to 75 per cent faster than the colossal 8800 Ultra in most benchmarks. For example, in one of our tests, the 8800 Ultra scores around 100 fps in *Prey* at 1920 x 1200 with maximum detail and 4x anti-aliasing and 8x anisotrophic filtering turned on. The GTX 280 AMP! beat it with a score of 173 fps. Even *Unreal Tournament 3* with all the settings turned up gave scores of 119 fps on the Shangrila map at 1920 x 1200. *3DMark 2005* and *2006* scores increased as well, but not to the extent of the real-world gaming benchmarks.

The card, in comparison, runs cooler than the 8800 GTXs, more so when compared to the 8800 Ultras. The cooling solution on the Zotac card is stock NVIDIA design. The card is a little less compact than the 9800GX2. It is lighter, but consumes over 300 W when on load. In idle, it drops to as little or lower than a 9800GTX card. A

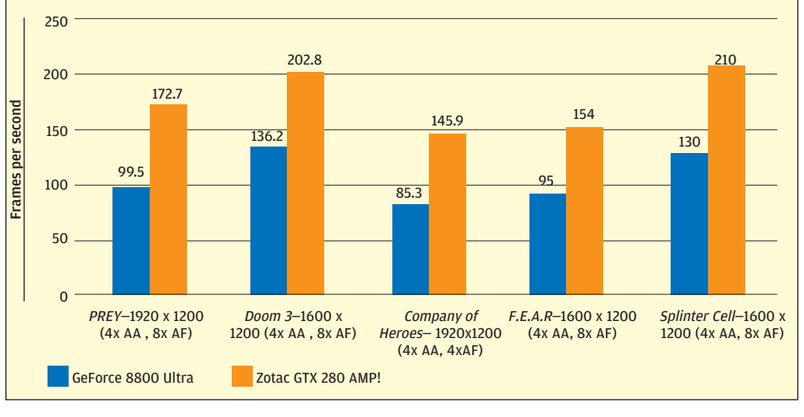


power supply of at least 600 W is highly recommended to any future owners.

The Zotac GTX 280 AMP! is a great card and we're sure some of the non over-clocked versions are really good as well. It would be terribly wrong to say that the GTX 280 is not a good card. There's significant improvement in performance. There's one major problem right now, other than the high power demands—the price. The current price for the Zotac GTX 280 AMP! is a whopping Rs 44,444, which makes it way over the top in terms of pricing.

As things stand today, the prices are exorbitant and with ATI releasing cards of their own priced at much lower prices offering better value for money, it's only a matter of time before the prices for the GTX 280 drop. GTX 260s are expected to hit the markets soon, so a little caution at the moment is recommended to look out for some extreme price drops.

Zotac GeForce GTX 280 AMP!



Specifications

GeForce GTX 280 @ 700 MHz, 240 core processors, 1 GB GDDR3, DirectX 10 support, Unified Shader Model 4.0

Contact: ZOTAC International (MCO) Ltd.
Phone: +91-11-46665666
E-mail: sales@zotac.com
Web site: www.zotac.com
Price: Rs 44,444

RATINGS	
Features	4
Performance	4.5
Build Quality	4
Value for Money	3
Overall	4

ASUS Extreme Striker II

Expensive Enthusiast DDR3 Platform

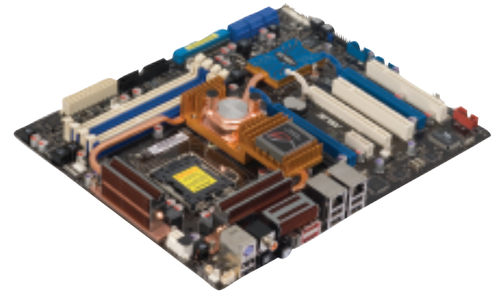
The ASUS Extreme Striker II is the first nForce 790i Ultra SLI-based board we review this month. The board is targeted at the extreme high-end performance demanding enthusiast.

ASUS has implemented several design changes. There are loads of copper heat blocks and pipes. To stop the heat sink fins from scratching, there are small strips of flat metal on each of heat sink, which also gives them a very eye-catching look. There's even a glowing *Republic of Gamers* logo on the board. The main heat sink also has a provision to attach a water cooling kit—all the necessary connectors and washers are provided.

The focus on overclockers and enthusiasts is visible in the CMOS. The first menu that opens has all the over clocking features and menus right there. Overclockers will love this board.

Other than a minor bump in the memory benchmarks, there is no other real improvement in the board. Game benchmarks also showed a 1 or 2 per cent improvement in *Doom 3*.

ASUS' energy saving EPU is built into the board, but there isn't the Express Gate features that allowed users to use the computer and the Internet, without booting into an OS. SupremeFX II is provided as an add-on module for sound that goes on to your motherboard. The box comes with *Company of Heroes: Opposing Force* and Kaspersky Antivirus.



The 790i doesn't offer anything special today and with DDR3 prices still not affordable for the masses, even the cheapest 790i boards don't impress large numbers. The ASUS Extreme Striker II doesn't give a bonus performance boost, but it does give you a whole lot of flexibility. The features and quality of the board is top notch, but at Rs 27,000, it is ridiculously expensive.

RATINGS	
Features	4
Performance	4
Build Quality	4.5
Value for Money	2
Overall	4

Specifications

LGA 775 socket, Chipset: nForce 790i Ultra SLI, Up to 1600 MHz FSB, Supports up to 2000 MHz DDR3 RAM OC.

Contact: ASUS Technology Pvt. Ltd.
Phone: 1-800-2090365
E-mail: media_india@asus.com
Web site: http://in.asus.com
Price: Rs 27,000

Kodak EasyShare V1073

Average Camera With HD Capabilities

With touchscreen devices getting cheaper and making their way into every possible gadget, cameras aren't being left out. Now, its Kodak's turn. The EasyShare V1073 is an 11 MP camera with a 3x optical zoom.



It is thin enough to fit into a shirt pocket easily, but that also makes it a little difficult to hold with a single hand. The touchscreen also makes it difficult to use the camera with just one hand. The power and shoot buttons are positioned close to each other. The 3-inch screen doesn't have great quality—it is pretty difficult to use outdoors even with the brightness turned up high.

The quality of photos isn't too different from its predecessors. The colours in the photos are pretty natural but the sharpness will likely be a little too much for most people's liking. There is image stabilisation, but images still end up a little blurry in well-lit scenarios. There is very little control given to the user, so there isn't a lot you can experiment with.

One of the key features is the HD 720p video recording resolution. A typical 25-second clip is 43 MB in size. The quality of the video clips is pretty impressive.

The touch screen makes a few other features easily accessible. For example, you can actually type in a tag for every single photo that you shoot using an on-screen keyboard. The high definition video recording is a feature that will interest many.

The price of Rs 13,999 is a fairly attractive price for a camera with these unique features.

RATINGS	
Features	3
Performance	3
Build Quality	4
Value for Money	3.5
Overall	3.5

Specifications

11.11 MP 1/1.63 in CCD sensor, 3x optical zoom, 3-inch LCD touch screen.

Contact: Kodak India Pvt Ltd
Phone: +91-9820510322
E-mail: kgdinkar@gmail.com
Web site: www.kodak.com
Price: Rs 13,999

BenQ E900WA
Value For Money



The E900WA is a 19-inch widescreen LCD from BenQ. A while back, we tested the BenQ X2200W—a 22-inch LCD monitor, which resembles this monitor in the looks department, at least.

At first glimpse, the designs are pretty identical. The stand is standard plastic without any special treatment or design but it is really flexible in allowing you to tilt the screen backwards and forwards. The screen cannot be rotated in any other direction, though.

The screen performs fairly well even though this is a TN panel. Viewing angles are alright but there is some visible backlight bleeding along the edges of the screen. There is also some wavering interference on the sides of the screen in certain patterns and the expected banding in TN panels is there towards the darker shades of color is there, but is not too noticeable.

There are speakers built into the screen and a 3.5mm cable is used to connect to it. There is also provision to connect an additional headphone. The volume control is easily accessible by the press of a single button. The speakers aren't great, but they get the job done for some basic casual gaming and music.

There is an Auto Adjustment feature which automatically sets up the monitor for you without having to change the settings manually. Using the menus is simple and the controls are placed on the right of the monitor. The interface itself is very colourful and user friendly, so pretty much anyone can use it. There are plenty of display modes geared towards different kind of viewing and each of these can be switched to without having to go through deep into the menu.

There is just a VGA connector available with this screen. The biggest missing feature in this monitor is a DVI port which is a must for any LCD screen today—especially one that costs Rs 9,600.

Specifications

19-inch widescreen, 1440 x 900, Contrast Ratio: 700:1, Response time: 5ms.

Contact: Neoteric / eSys
Phone: 1-800-22-0808
E-mail: sales.enquiryin@BenQ.com
Web site: www.benq.co.in
Price: Rs 9,600

RATINGS	
Features	3.5
Performance	3.5
Build quality	3.5
Value for Money	4
Overall	3.5

Transcend T.sonic 850
Expensive, But Still Good

The Transcend T.sonic 850 is an upgrade from the T.sonic 840. The styling has a few changes and the controls that were on the side with the 850 have returned to the front of the player. Transcend has also done away with the 840's metal back—which we liked because it gave it a solid robust feel.



An 1.8-inch screen allows you to watch videos and read text. While listening to music, the screen is used to display the visualisation. The buttons feel good and the controls are really simple to get used to. The earplugs supplied are pretty bad in quality with a cheap feel to them. The player is capable of driving full fledged headphones as well.

The player can be used to view images and movie playback as well, but only one format—MTV—is supported. Conversion software is provided for this purpose. You can simply dump files in to the player, without the need of any syncing software. Books can be read as well, but only TXT files are supported. Data transfer rates are perfect and the player is able to skip through songs and fast-forward without any effort. There is a protection cover supplied with the player to prevent any fine scratches to the surface.

The player is available in 4 GB and 8 GB versions. We received the white 4 GB version, for testing and is priced at Rs 5,500, which we think is a little overpriced. From a standpoint of a T.sonic 840 user, there is nothing in the 850 that will convince you to move to it. For anyone looking for a decent-value-for-money media player, the T.sonic 850 fits the slot perfectly.

Specifications

Capacity: 4 GB, Formats supported: MP3, WMA, WAV, MTV Dimensions: 81.5 x 41.5 x 12.7 mm

Contact: Mediaman Infotech Pvt ltd
Phone: +91-22-23828100 / 8200
E-mail: sales@mediamangroup.com
Web site: www.transcendusa.com
Price: Rs 5,500

RATINGS	
Features	4
Performance	4
Build quality	4
Value for Money	3.5
Overall	4

ZOTAC nForce 790i-Supreme
Costly, And Perhaps Early



NVIDIA's only offerings aren't just the new range of graphics cards, but also motherboard chipsets. The 790i chipset for Intel processors is one of the top models offered today, and the Zotac nForce 790i Supreme is based on it.

The board design and layout is the same as the stock layout used by NVIDIA. There are no additional cooling enhancements. There are plenty of heat sinks and heat pipes connecting them, but the quality isn't all that great. The big difference in the 790i chipsets is that these are DDR3-only boards. There are four slots for up to 8 GB of memory.

The board supports 3-way SLI. The BIOS is clean and is pretty standard with nothing out of the way. There are several over clocking features. The HD audio solution is based on Azalia and there is a dual Gigabit LAN built into the board.

In terms of performance, it matches the P35 and X48 chipset motherboards that we tested. Even the hard drive marks matched other motherboards of its class. The drive index for our drive showed 78 MBps but the memory benchmark was a tiny bit higher than the ones on the P35 boards running DDR2 memory. There was a minor 5 to 6 per cent in the memory benchmarks, but it didn't translate to performance in real world benchmarks such as games.

The entire package doesn't come with anything special, other than the usual cables and back panels. A WiFi kit is also included.

DDR3 is still very expensive to consider and the price of this board doesn't help. At Rs 19,899, it is an extremely expensive proposition for a performance rig, especially with no clear benefits of DDR3 visible at the moment. Users thinking of investing a lot in a long term 3-way SLI rig running on DDR3 memory should go for this.

Specifications

LGA 775 socket, Chipset: nForce 790i Ultra SLI, Upto 1600MHz FSB, Supports 3-way and Quad SLI, 4 DIMM slots for 8GB DDR3 memory, Dual Gigabit LAN

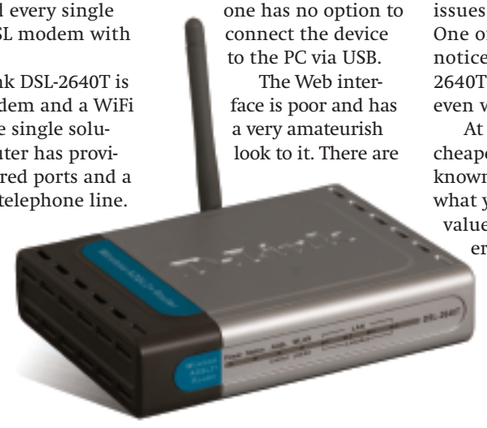
Contact: ZOTAC
Phone: +91-9920675457
E-mail: sales@zotac.com
Web site: www.zotac.com
Price: Rs 19,899

RATINGS	
Features	4
Performance	4
Build quality	5
Value for Money	2
Overall	3.5

D-Link DSL-2640T
Great Features, Good Value

If you can find a telephone line, you've found an ADSL2 connection. Country wide ISPs like BSNL and MTNL provide users with broadband connections and every single one has a DSL modem with them.

The D-Link DSL-2640T is an ADSL modem and a WiFi router in one single solution. The router has provision for 4 wired ports and a port for the telephone line. This is an 802.11g router. The design is the standard design D-Link uses for most of its ADSL modems. Setting up the router is incredibly simple and the installation CD guides you through the setup. Unlike some of the other D-Link models, this one has no option to connect the device to the PC via USB.



The Web interface is poor and has a very amateurish look to it. There are plenty of features in the interface though. There is everything from firewalls and port forwarding to parental control built into it.

File transfers on a wired network are fast. A 700 MB file takes around a 100 seconds to copy. There are no visible latency issues with the DSL-2640T. One of the things you notice is that the DSL-2640T gets a little warm even when idle.

At Rs. 3,200, it is cheaper than some well known brands, but you get what you pay for. It is good value for money, considering the number of features it has. What it doesn't have, is an attractive design so you can keep it on your table for everyone to see. For a user who has a multiple PCs and a laptop, this ADSL Wireless router makes perfect sense to buy.

Specifications

Built in ADSL, 802.11g Wireless LAN, 4 RJ-45 10/100 Mbps ports,
Maximum ADSL speed: ADSL2+ 24 Mbps downstream and 1 Mbps upstream.
Dimensions: 142 x 109 x 31 mm, Weight: 239.4 gms

Contact: D-Link India Ltd.
Phone: +91-22-30616666
E-mail: sales@dlink.co.in
Web site: www.dlink.co.in
Price: Rs 3,200

RATINGS	
Features	4
Performance	3
Build quality	3.5
Value for Money	3.5
Overall	3.5

Kameleon 8 URC 8308

Mammoth All In One

People owning different electronic appliances such as TVs and set top boxes know there's an additional burden of running around for different remotes to control each one of them. The Kameleon 8 URC 8303 is an all-in-one remote to take away all the hassles.

The device is sturdy and built well with its aluminium body, but it's also is very large—to the point where it's a little difficult to hold in your hand. The most attractive feature other than being able to control the devices through a single device is the touchpad, with an attractive display.

Setting up the remote for the devices is extremely simple and most of the buttons and menus automatically show up on the remote. The remote can also be set up to learn from other remotes. Every time the device in use is changed, the display also changes the icons for them accordingly. The remote's use isn't limited to just TVs and set top boxes—it can even be used to control the lighting of your room.

Other than the touchpad buttons, there are also hard physical buttons for changing channels and adjusting volume levels. Unfortunately, these are really tiny and awkward in a remote of this size. The remote runs off three AAA batteries.

There aren't a lot of companies that sell all-in-one remotes in India. The price of the URC 8308 Kameleon 8 is Rs 4,995 in the market, which might make it seem a bit expensive. However, it's worth every single penny if you own many remote controlled devices. The other alternative for this kind of remote are priced at much higher rates. If you ignore the size of the remote, then it's a really classy looking product for your home.



Contact: One For All
Phone: +91-80-40351800
E-mail: ajit@uebv.com
Web site: www.oneforall.co.in
Price: Rs 4,995

RATINGS	
Features	★★★★½
Performance	★★★★
Build Quality	★★★★
Value for Money	★★★★
Overall	★★★★

MSI X48C Platinum

DDR2 And DDR3!

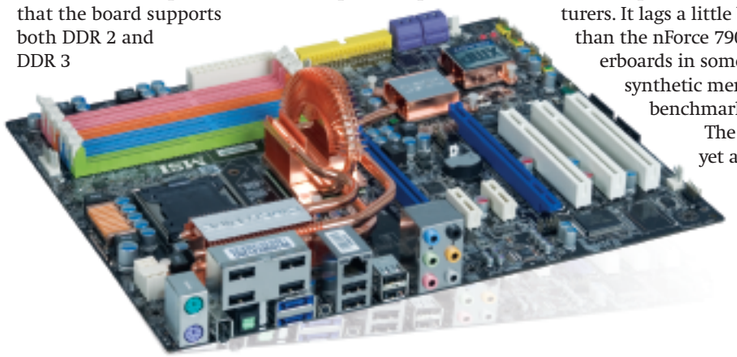
Intel has recently unleashed out many new chipsets into the market and the X48 is one of the latest. MSI has released a board based on this chipset—the MSI X48C Platinum. The board supports ATI's CrossfireX through two PCI-E 2.0 x16 slots.

The design is spruced up with copper fins and heat sinks. The feature that makes the X48C special is that the board supports both DDR 2 and DDR 3 RAM. There are two slots for DDR2 and four for DDR3, which allow for a maximum of 4 and 8 GB of RAM respectively. Both the RAM modules will not operate together and a separate memory turbo cards are provided to place in the unused slots.

The layout is clean overall, but there are no clips to lock cards in place. The SATA ports are placed out the way of the PCI-E slots. Realtek's ALC 888 is used as the audio solution for the motherboard, and it also has Realtek's 8111B Gigabit networking solution. At the rear end, there is no shortage of connectivity options. There are eight USB ports and also two PS2 ports for the keyboard and mouse, which had become a rarity on some of the newer boards.

The board performed flawlessly in the tests. Once again, there is little performance improvement over the other chipsets and manufacturers. It lags a little behind than the nForce 790i motherboards in some of the synthetic memory benchmarks.

The X48 is yet another upgrade from the previous X38 platform and brings nothing special to the table other than a few minor upgrades. At Rs 15,500, it isn't mainstream material either. It will, however, interest users who want to go to DDR3 when they get cheaper—but as of now, they're happy with DDR2.



Specifications

LGA775, Supports FSB up to 1600MHz, ICH9R Southbridge, Supports up to DDR3 1600 and DDR2 800, ATI CrossFire supported.

Contact: MSI
Phone: +91-11-41758808 / 09
E-mail: marketing@msi-india.com
Web site: www.msi-india.com
Price: Rs 15,500

RATINGS	
Features	★★★★
Performance	★★★★
Build Quality	★★★★
Value for Money	★★★
Overall	★★★★

Kingston DataTraveler 400

Good Performer And Secure!

Kingston's DataTraveler 400 is a product focussing on the mobile office-goer. Security is one part of the concern and the other being able to carry data regularly and synchronising it with their home PC. We have the 2GB version of the DataTraveler 400 here with us.



The design is sturdy and the drive opens up on an axis from its protection layer. The DT 400 isn't just about looks. A thorough run through the benchmarks reveals it is also quite the performer. In the sequential file transfer tests, we were able to write 100 MB files to the drive in 8 seconds and read off it in 3.6 seconds. SiSoft Sandra recorded read speeds of 33 MBps. Random access times were also very low at 0.4 seconds. Burst speeds of 35 MBps were also recorded in HDtach.

There are additional features for security in the drive. As with other manufacturers, there's a utility, which allows you to create a secure partition. An additional utility called Migo Sync is also bundled on the drive. It allows you to select folders on the computers and sync data between multiple PCs. It isn't just files and folders that are synchronised—it's also data from mail clients and browsers. The application itself is actually quite extensive in features.

The 2 GB DataTraveler 400 is priced is priced at Rs 2,255. In comparison, standard 2 GB flash drives are available at giveaway prices of around Rs 500. It's difficult to justify this kind of price for 2 GB drives, even though it's a well performing flash drive.

Specifications

Capacity: 2 GB, Dimensions: 70 x 22.4 x 11.3 mm

Contact: Kingston Technology
E-mail: sales_india@kingston.com
Web site: www.kingston.com
Price: Rs 2,255

RATINGS	
Features	★★★½
Performance	★★★★
Build quality	★★★½
Value for Money	★★½
Overall	★★★½

Thermalright Ultima 90i

Intel On Ice

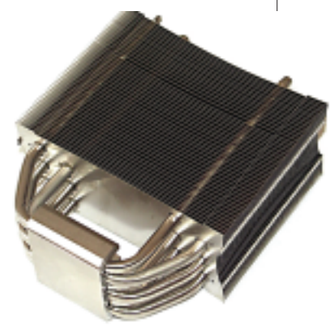
One of the things both Intel's 65-nm and 45-nm parts have in common is their over clocking potential, and as any Core 2 Duo user will tell you, simply buy a slower processor and overclock it to faster speeds. But you don't want to be over clocking uncontrollably, as even Intel's excellent thermal thresholds are easily crossed once the FSBs and multipliers are tweaked.

Thermalright is a known vendor of high performance CPU and GPU aftermarket coolers. Their latest CPU cooler—the Ultra 120 Extreme—is a massive tower-like cooling solution featuring six heat pipes. This monster needs to be paired with an equally space hogging 120-mm fan to perform at its best. Many users' cabinets also aren't wide enough to accommodate the high Ultra 120 Extreme, so Thermalright's design engineers came out with the Ultima 90i. It's much smaller and weighs just 460 grams—much lighter than the Ultra 120's 790 grams. This cooler is best used with a 92-mm fan. It looks like a shrunk down Ultra 120, and retains the same six heat pipes.

To install this heat sink, you'll need to remove your motherboard. This involves the installation of a back plate on the rear of the motherboard. Though tedious, this is the best way to secure a CPU cooler.

We used this heat sink with two processors—a hotter, and older Core 2 Duo Extreme X6800 (2.93 GHz), and a newer Core 2 Quad Extreme QX9650 (3 GHz).

A difference of 24 degrees on an over clocked quad core just says it all. Even the older X6800 runs 22 degrees cooler at a clock of 3.5 GHz. Very impressive for a cooler which weighs the same as Intel's stock cooler. There are two issues we see with users swapping out their stock Intel coolers and plonking this on—the tedious installation, and the absence of a fan with stock package. A good 92-mm fan from the likes of Panaflo or NMB will set you back by a cool Rs 600, which should be added to the price of the cooler. At Rs 2,500 for the Ultima 90i, you're looking at around Rs 3,000 for the entire setup. Good for overclockers, others give it a skip.



Scores

Processor	Core Speed (Stock Cooling)	Temperature (Ultima 90i)	Temperature
Core 2 Duo X6800	2.93 GHz	61 deg	47 deg
Core 2 Duo X6800	3.5 GHz	71 deg	49 deg
Core 2 Quad QX9650	3.00 GHz	66 deg	48 deg
Core 2 Quad QX9650	3.81 GHz	75 deg	51 deg

RATINGS	
Features	★★★½
Performance	★★★★½
Build Quality	★★★★
Value for Money	★★★
Overall	★★★★

Specifications

Six heat pipe-based cooling solution, weight—460 gm, dimensions—115 x 55 x 139 mm

Contact: Tirupati Enterprises
Phone: 9339207519
E-mail: mail@tirupati.net
Website: www.thermalright.com
Price: Rs 2,900

Motorola MotoYUVA W230

For Someone Who Just Wants To Talk



The Motorola MotoYUVA W230 is one of the more basic GSM phones available on the market today. Not everyone uses their phone to write long e-mails and play games on them.

The design of the phone is plain and all the keys have a heavy, but plastic feel to them. The phone is thin and lightweight. The screen is too small to be of use for anything beyond making phone calls. The keys give decent feedback too.

Coming to performance, the interface itself is zippy. There is no waiting for menus and pages to load. The quality of voice is also good, without any unnecessary enhancements. The signal strength is good, but while speaking, there is some instability and jitter.

The phone comes with a set of earplugs that connect to the phone using a 2.5-mm jack. The quality and clarity of the music played from the phone is good, but lacks bass. FM radio function is built in and it works pretty well. The speakerphone is not very loud, but it sounds nice too. Because of these characteristics, it makes a good music phone. The only problem is that the external memory card supplied with the phone is just 256 MB. The internal memory onboard the phone is a paltry 1 MB.

As an entry level phone, the Motorola MotoYUVA W230 makes good sense for its performance, but the styling could be a lot better. For someone who needs a phone purely to make calls, the MotoYUVA W230 is perfect. The price of Rs 3,135 for a phone like this is good, but there are a lot other choices for the users. Users might want to look what kind of style suits them best.

RATINGS	
Features	★★★
Performance	★★★½
Build quality	★★★
Value for Money	★★★
Overall	★★★

Specifications

Screen: 1.6 inch, Resolution 128 x 128, 65K colours, USB 1.1 connectivity, Up to 2GB MicroSD supported, Dimensions: 45 x 110.97 x 14.7 mm

Contact: Motorola
Website: www.motorola.com
Price: Rs 3,135

Corsair HX620

Highly Efficient powerhouse

Corsair is a respected name when it comes to memory and USB drives, but power supplies? The HX620 ships in a strong, colourful carton and the PSU is encased in soft foam and well-protected from damage. A quality pouch has been provided, which houses all the modular cables and an embossed 3D sticker labelled *powered by Corsair*.

The unit itself has a matte black finish that looks rugged, no smudges here, and even screws don't leave marks on this finish, so durability is not as issue. The unit is heavy, and through the honeycomb grille at the rear part a PFC unit is visible. The HX620 makes do with a single 120-mm fan installed in a pull configuration meaning this fan should be facing your motherboard when the PSU is installed. The modular cables are long enough to reach all motherboard connectors, and this PSU supports 4x6 pin PCIe connectors, so even cards which require two 6-pin connectors can be SLIed. Each modular SATA connector cable has 4 ports, so a maximum of 8 SATA hard drives are supported. There is support for up to 6 PATA devices too. The HX620 is 80 plus rated, meaning it delivers an efficiency of at least 80 percent under all conditions.



We tried to load up the HX620 with as many devices as we could. A Core 2 Quad QX9650 (3.0 GHz), ASUS 780i motherboard, 4 GB of DDR2 1066 MHz memory, 2x NVIDIA GeForce 8800GTX graphics cards, two 150 GB WD Raptor HDDs and a Sony Blu-Ray writer. This configuration was then benchmarked for a solid three hours during which we had no crashes and no restarts whatsoever. It seems the Corsair can really deliver its rated wattage and for sustained periods of time, and this configuration will simply blow most run-out-of-the-mill power supplies right out of the water. And all the while the HX620 ran cool (measured 42 degrees) and quiet.

Unless you're looking at quad SLI or 4-way Crossfire or 2x GeForce 9800GX2 / Radeon HD3870 x2, or two of the newer GeForce GTX 280's you will never need anything more. For a single graphics card this is more PSU than you'll probably need and its smaller (by 100 watts) sibling the HX520 will do the trick.

At Rs 6,500, Corsair has delivered an excellent power supply for those who need medium to high quantities of juice out of their power supplies. If you plan on building a powerful rig this is a really good PSU to invest in and worth every bit of its price.

RATINGS	
Features	★★★★
Performance	★★★★
Build Quality	★★★★½
Value for Money	★★★½
Overall	★★★★

Specifications

620 watts, modular, supports 4x PCI Express connectors, 8x SATA connectors, 6x PATA connectors, 80 plus certified, NVIDIA SLI certified.

Contact: Tirupati Enterprises
Phone: 9339207519
E-mail: mail@tirupati.net
Website: www.corsair.com
Price: Rs 6,900

Chirag CD 18

Cheap But Lacking Power



Those who don't own a desktop today opt for a basic notebook that they can carry around instead. Performance isn't the necessity for most of them, but features are and this market has been growing steadily. The Chirag CD 18 is a laptop targeted towards this kind of consumer market.

The CD 18 comes with a 12.1-inch screen that has a resolution of 1280x800. The screen quality is average but viewing angles are pretty poor. Being an entry level laptop, there isn't a lot of firepower but a 1.86-GHz Core Duo T2350 processor is much more than enough for tasks. The graphics are powered by the onboard ATI Xpress 200 solution.

The design is compact but the laptop is very thick. The right top region of the laptop gets warm pretty quickly. The keys feel cheap and so does the body material itself. It feels like a rather old outdated system.

The performance is as expected. *Far Cry* at 640 x 480 with low quality gave average frame rates of around 26 fps. *3D Mark 2005* results matched some of the other laptops of its class, because of the respectable graphics solution on the laptop.

There are few missing things—there is no inbuilt Bluetooth, nor is there a webcam. To make up for that, there is an external Bluetooth dongle provided and a USB drive as well. All the other regular features are present.

An additional 512 MB of RAM would give it some more performance to compare well with the other laptops of its class, and it would have enabled users to be able to run Vista on it as well.

The CD18 is a 12.1-inch screen which makes it a fairly compact laptop in that aspect. It still has a bad design and feel, and seems a little costlier than what it should have been.

Specifications

Intel Core Duo T2350 1.86 GHz, 512 MB DDR2 RAM, 12.1-inch screen, 1280 x 800 resolution

Contact: Chirag
Phone: 033-22134934
E-mail: info@rpchirag.com
Web site: www.rpchirag.com
Price: Rs 34,499

RATINGS	
Features	★★★½
Performance	★★★
Build Quality	★★★½
Value for Money	★★★½
Overall	★★★½

EASEUS Partition Manager Server

Basic Partitioning Utility

System utilities have found a market, just like antivirus and backup solutions. EASEUS Partition Manager Server is one such application. It is a disk partitioning utility and the Server edition is meant for the enterprise market.

Installation is simple, and the software detects all the partitions on the drive properly. It supports all kinds of drives, including USB and Firewire. The core function of the program is to partition the hard drive, and it does that well. Partitions can be resized and this is especially useful when you are trying to install a Linux distribution for example.

Partitions can also be hidden and there are features for scanning the disk or partition for any errors. An ISO image is provided for those who want to use the application through a bootable floppy or CD.



FreeDOS loads and the application loads through it. This is useful when you lose a partition and require recreating or resizing them.

EASEUS Partition Manager Server does look a lot like Norton's Partition Magic. Security is checked by a password that can be set once the application is installation. All future running of the software requires the user to enter a password.

Help for the software is provided through a PDF document and also a Windows help file. All the features are explained in detail with a few scattered screenshots.

Norton's Partition Magic and Paragon Partition Manager are some of the more well known partitioning tools and EASEUS Partition Manager is direct competition to them. The EASEUS Partition Manager Server comes with a price tag of $99.95 (Rs 4,250) and the big different is support for more operating systems.

As just a partitioning tool, most users do not need one and need for one would only be larger companies with multiple computers. For home users, there are a few products on the Internet which can do the same job for free.

Requirements

500 MHz processor, 256 MB RAM, Windows 2000 SP4, Windows XP, Windows 2003, Windows Vista.

Contact: EASEUS
E-mail: sales@easeus.com
Web site: www.easeus.com
Price: $99.95 (Rs 4,250)

RATINGS	
Features	★★★½
Performance	★★★★
Ease of use	★★★★
Value for Money	★★½
Overall	★★★½

External Portable Hard Drives
WD Passport Portable (Black)
- ⊞ Excellent performance, good value
- ⊟ None in particular

Contact Champion Computers Pvt Ltd
Phone +91-11-26214751
Web site www.championindia.com
Price Rs 6,500



Internal Hard Drives
Seagate 7200.11 500GB ST3500320AS
- ⊞ Value for money, performance
- ⊟ None in particular

Contact Fortune Marketing
Phone +91-11-2641 4468
E-mail sales@fortune-it.com
Price Rs 4,900

Internal DVD-Writers
Samsung SH-S203
- ⊞ Performance, inexpensive
- ⊟ None in particular

Contact Samsung India Electronics Pvt Ltd
Phone +91-11-41511234
E-mail c.serrao@samsung.com
Price Rs 1,200



Internal Hard Drives
Seagate 7200.11 750GB ST3750330AS
- ⊞ Class leading performance
- ⊟ None as such

Contact Fortune Marketing
Phone +91-11-2641 4468
E-mail sales@fortune-it.com
Price Rs 8,900

MP3 Player above Rs 10,000
Cowon D2
- ⊞ Very good performance
- ⊟ Slightly bulky

Contact Lipap Systems P. Ltd
Phone +91-9819917440
E-mail iaudio@lipap.com
Price Rs 11,000



Digital Cameras (High-End)
Canon PowerShot A570 IS
- ⊞ Good overall performance
- ⊟ Lacking in macro performance

Contact Canon India Pvt Ltd
Phone 1-800-345-3366
E-mail info@canon.co.in
Price Rs 13,995

Graphics Cards (High-End)
Galaxy GF8800Ultra
- ⊞ Sheer performance
- ⊟ Heats up

Contact Technology and Gadgets
Phone +91-22-23823331
Web site technologyandgadgets.com
Price Rs 35,000



Graphics Cards (Mid-range)
ASUS EN8600GT
- ⊞ Well priced, fast
- ⊟ None in particular

Contact Asus Technology Pvt Ltd
Phone +91-22-67668800
Web site http://in.asus.com
Price Rs 8,800

Desktop PCs
Sahara 20CK16
- ⊞ Great performer
- ⊟ Slightly bulky

Contact Sahara Computers & Electronics Ltd
Phone +91-120-4397777
E-mail info@saharacomputers.co.in
Price Rs 40,000



AMD AM2 Motherboards
Gigabyte GA-MA69G-S3H
- ⊞ Well built, feature rich
- ⊟ None in particular

Contact Gigabyte Tech India Ltd
Phone +91-22-30616666
E-mail sales@gigabyte.in
Price Rs 6,900

Intel P35-based Motherboards
ASUS P5K Premium
- ⊞ Excellent enthusiast solution
- ⊟ Expensive

Contact ASUS Technology Pvt Ltd
Phone +91-22-67668800
E-mail media.india@asus.com
Price Rs 15,870



Intel Integrated Graphics Motherboards
Gigabyte GA-G33-DS3R
- ⊞ Very good layout
- ⊟ Expensive

Contact Gigabyte Tech India Ltd
Phone +91-22-30616666
E-mail sales@gigabyte.in
Price Rs 9,500

WiFi Routers
D-link DIR-655
- ⊞ Excellent signal coverage
- ⊟ Expensive

Contact D-Link India Ltd.
Phone +91-22-3061 6666
E-mail sales@dlink.co.in
Price Rs 13,500

Mono Laser MFDs
Brother MFC-7420
- ⊞ Great cost per page, fax
- ⊟ No Ethernet Port

Contact Brother International India Pvt Ltd
Phone 1800-222-422
E-mail customercare@brother.in
Price Rs 18,000



PCI TV-Tuners
Leadtek Winfast PVR2000
- ⊞ Excellent video quality and software
- ⊟ Expensive

Contact Topnotch Infotronix (India) Pvt Ltd
Phone +91-44-42042565
E-mail naqui@zebronics.net
Price Rs 5,500



Mono Laser Printers
HP LaserJet 1020
- ⊞ Good combination of speed, print quality, and warranty
- ⊟ A bit slow in comparison to others

Contact Hewlett-Packard India Sales Pvt Ltd
Phone +91-124-2566111
E-mail kakuni.mahto@hp.com
Price Rs 6,999

The A-List

The best products tested so far in different hardware and software categories



2.1 Speaker Sets
Altec Lansing MX5021
- ⊞ Excellent performance
- ⊟ Some minor vibrations in woofer

Contact Rashi Peripherals Pvt.Ltd
Phone +91-22-67090909
E-mail altec@rptechindia.com
Price Rs 7,600



5.1 Speaker Sets
Logitech Z-5500 Digital
- ⊞ Explosive power
- ⊟ Too expensive

Contact Logitech
Phone +91-22-26571160
E-mail kavita_nath@logitech.com
Price Rs 27,995

MP3 Players up to Rs 5,000
Apacer Steno A4351
- ⊞ Good performence
- ⊟ Tacky build, Screen quality

Contact Apacer Technology
Phone +91-80-25702208
E-mail suraj_raina@apacer.com
Price Rs 1,720

MP3 Players up to Rs 10,000
Samsung T10
- ⊞ Good music quality, nice screen
- ⊟ Tacky exterior

Contact Samsung India Ltd
Phone +91-11-41511234
E-mail jitendra.c@samsung.com
Price Rs 6,600



Projectors
NEC VT800
- ⊞ Excellent performer
- ⊟ Slightly pricey

Contact NEC India Pvt. Ltd.
Phone +91-11-4657 0000
E-mail enquiries@necindia.in
Price Rs 92,000





LCD Monitor
LG 246Wp
- ⊞ Great performance and Build
- ⊟ Bulky, Slightly expensive

Contact LG Electronics India Pvt. Ltd.
Phone +91-120-2560900 / 940
E-mail sanjoyb@lgindia.com
Price Rs 28,000

Processors
Intel QX6850 Core 2 Extreme
- ⊞ Extreme performance
- ⊟ Expensive

Contact Intel Tech India Pvt Ltd
Phone +91-9833823474
E-mail saranya.rustagi@intel.com
Price Rs 52,000

Multimedia Cell Phone above 20,000
Nokia N95 8 GB
- ⊞ Great all round performance
- ⊟ Slightly bulky

Contact Nokia India
Web site www.nokia.com
Price Rs 28,000



Below Rs 20,000
Sony-Ericsson W910i
- ⊞ Great sound
- ⊟ Flat and clumsy keypad

Contact Sony Ericsson Mobile Comm. India Pvt Ltd
Web site www.sonyericsson.com
Price Rs 19,000

Business Device
Nokia Communicator E90
- ⊞ Extremely powerful
- ⊟ Heavy, bulky

Contact Nokia India
Web site: www.nokia.com
Price Rs 40,499



Value Executive Phone
Nokia E51
- ⊞ Loads of features
- ⊟ None

Contact Nokia India
Web site www.nokia.com
Price Rs 13,000

Office Inkjet MFDs
HP Photosmart C4188 All-in-One
- ⊞ Good print quality
- ⊟ No fax

Contact HP India Sales Pvt. Ltd.
Phone +91-124-2566111
E-mail kakuni.mahto@hp.com
Price Rs 7,999

DVD/DivX Players



Samsung DVD-1080P7
- ⊞ Great looks and performance
- ⊟ No 5.1 channel RCA

Contact Samsung India Electronics Pvt. Ltd.
Phone +91-11-41511234
E-mail shailja.m@ samsung.com
Price Rs 2,990

Mice
Logitech MX Revolution
- ⊞ Has a flywheel
- ⊟ Expensive

Contact Logitech Electronic India Pvt Ltd
Phone +91-22-26571160
E-mail response@logitech.com
Price Rs 8,000

Laptops
Dell XPS 1530
- ⊞ Well built, powerful
- ⊟ Heavy

Contact Dell India
Phone +1-800-4254026
E-mail Online_India@dell.com
Price Rs 49,900





Shrikrishna Patkar

Email Architecture

What do MUA, MX and POP3 mean? How is your e-mail delivered? More on these...

Bhaskar Sarma

How does e-mail really work? What pathways are followed, which protocols are used and how it gets delivered to **joe@domain.com** and not to **jon@domain.com** is not really understood, despite millions e-mailing everyday.

Local Deliveries

Let's assume that your e-mail address is **name@domain.com** and you are using an e-mail client like Outlook or Thunderbird to send and receive e-mails. This is known as Mail User Agent (MUA). For sending mails, the MUA uses Simple Mail Transfer Protocol (SMTP) to a Mail Transfer Agent (MTA) like Gmail. In some cases, if the user is directly using the Web mail interface, the MUA does not come in the picture.

If the address in the "to" field has the same domain, then the MTA does a search in the local mailboxes (each user has their own mailbox, much like in the real world) and then delivers the mail. The receiver's Mail Delivery Agent (MDA) (Outlook or a server) retrieves this mail either using the Post Office Protocol (POP3) or Internet Message Access Protocol (IMAP4). If POP3 is used, the message is copied to the local e-mail client and a copy is or isn't retained on the server depending on the client settings. On the other hand, if IMAP4 is used, then a copy of the message is always retained on the server. However, this system works only for small networks. In case the domains are different, or the sender and the receiver are both using e-mail services like Gmail or Hotmail, an entirely different and complicated process takes place.



DNS And MX

In this case the MUA or Web mail connects to the local MTA, which is operated by the ISP. SMTP is used in this connection through port number 25. In case of heavy load, an e-mail queue is formed, while the MTA processes each e-mail. Rarely does the e-mail go directly to the receiver's inbox when it has entered the cloud (Internet). Instead, it is accordingly routed, depending upon the availability or non-availability of MTAs. MTAs use the data in the headers of the e-mail to ask the Domain Name Servers (DNS) for the route. Typically, a single message would be routed across multiple MTAs before it's delivered. Since IP addresses are the only thing that computers understand, the MTA typically looks at the domain name (the part after @) in the DNS to find the Mail Exchange (MX) record for that domain. Before this, domain name resolution has to be done, starting with the top level domains like **.org**, **.edu**, **.net**, **.gov** (there are 13 of them).

Consider that the e-mail address of the recipient is **x@otherdomain.com**. The MX record that is obtained from the DNS is actually a prioritised list of servers for `otherdomain.com`. The mail is progressively channelled through the different MX servers in a decreasing order of priority, until the designated host for the domain is found. MX servers are actually another name for MTAs that receive email. The last MTA then transfers the mail to the host and it is retrieved by the recipient using their MDA, or accessed through Web mail using either POP3 or IMAP4 protocols.

Spam, Relays, Firewalls

Spam is unsolicited e-mail which is recognised as the biggest disadvantage of e-mail. To prevent spam from clogging up inboxes, spam filters are used. Then there are firewalls and anti-virus filters that the e-mail must pass through. The anti-virus program resides at the firewall and checks all incoming mail and attachments for malicious code. If spyware or malware is found, then the message is quarantined.

Format And Security

The format of e-mail messages is called MIME (Multipurpose Internet Mail Extensions). Before MIME, only plain Roman text could be sent. MIME specified how other types of information are to be formatted so that they can be sent along with e-mails. The mapping between MIME and other formats are automatically done by MDAs and mail servers.

E-mail is usually sent over open channels, which made it open to interception. Nowadays, mechanisms like digital signature and PGP (Pretty Good Privacy) are used so that e-mail is reasonably secure. However, the way e-mail is delivered and stored leaves it open to privacy issues.

Pushmail

Pushmail is the type of e-mail found on handhelds and smart phones. In this type, the Internet connection is always "on" and the e-mail is immediately delivered to the device, the instant it arrives on the server. In many cases only the header may be retrieved to the handheld so that bandwidth is not wasted. IMAP4 supports pushmail, while Blackberry uses its proprietary push mail protocol in its devices. ⊠

bhaskar.sarma@thinkdigit.com



Shrikrishna Patkar, Jiten Gandhi

Michael Browne

The last time we reviewed projectors was in March last year. A lot has changed over the past 15 months or so. For one, LCD and Plasma TVs, which are the projectors main competition have gotten bigger, and cheaper. Projectors have also evolved, albeit at a slower rate. The whole move by nearly all projector manufacturers towards a more *jack-of-all-trades* approach—when it comes to performance—is a recently surfacing trend. We assume this is done to ensure easier market acceptance of their products—an important criteria for a product like a projector whose sales can hardly be compared to *hot cakes*.

Courtesy this all-rounder approach, nearly all our test candidates were able to do better in a wide variety of tests instead of just excelling in a couple of tests. Although certain audiences may complain, we feel more users may be attracted to these devices that are better able to withstood the onslaught of large screen flat panels.

That being said projectors don't really compete with flat panels across the board. There are certain circumstances where a projector will be more beneficial and vice versa.

A projector scores big when it comes to size of the image displayed, and if you need a huge display for presentations, movies, or any content that you wish to be viewed by a roomful of people, then congratulations–you're barking up the right tree. With an image size that can exceed 120 inches from a distance of around 20 feet we're not joking about the *size* part. Consider that most projectors in the range of Rs 60,000 can easily manage an image of this size and with acceptable clarity, and a projector in the price range of Rs 90,000 would give you an even better and more cinematic HD movie and gaming experience at the same colossal screen size. A very good screen would set you back by another Rs 20,000. Now, blowing just over Rs 1 lakh may seem expensive right? It is—but not when you consider what you're getting in return. Consider that a good 42-inch LCD TV (one third the screen size) costs around Rs 1 lakh as well. A 55-inch plasma panel would cost well over a lakh. Anyone who has ever watched movies, presentations, or even played games on such a large screen area will tell you the *bigger* the *better*. So get rid of the notion that projectors are expensive.

Projectors are more affordable than ever before and offer unmatchable value per inch of display size. Select one from the bunch we've tested...

Rs 50,000 To Rs 1 Lakh
A Cinematic Experience

NEC VT595
The smaller brother of the VT700 and a good looking projector sporting a curved body design and a glossy white finish that combine to get it looking as slick as it is classy. The remote control isn't as smart looking, but the keys impart good feedback. The VT595 has somewhat decent connectivity options with VGA, DVI, S-Video and Composite connectivity on the video front. USB and RJ45 connects have also been provided. It's obvious the VT595 is aimed at the household audience looking for a projector that's both feature-rich and performs decently. A price tag of Rs 54,000 isn't too steep for its audience either.

DisplayMate spoke volumes about its lacking contrast ratio. In the colour tests, we found no serious issues—but felt there was scope for improvement in the colour rendition and quality. Also, the clarity of this projector wasn't really as impressive as we'd initially expected.

It didn't do a lot in the text tests also, so its use in presentations should be very limited. In the movie tests however, we experienced a small turnaround. Game quality was also pretty good, but not what we'd classify as *very* good, so gamers looking for a projector should look elsewhere.

For its price, the NEC VT595 offers a good feature set, it's easy to use, and most of all performs above what is acceptable for a device of its price. If you're serious about movies and / or gaming, then you need to look elsewhere.

NEC VT800
The bigger brother to both, the VT595 and the VT700, the VT800 is both bigger and better looking than both its smaller siblings. It's got an even higher quality piano-white finish and the body shape is attractively versatile—equally suitable for living room and board room alike. It's rich in connectivity options with an HDMI port to go with the VGA, Composite, and S-Video connects. RJ45 and USB connects are also available. With such connectivity options, this projector will suit *both* corporate and home users. The settings are very transparent and the menu layout excellent. It's even got settings for adjusting the aspect ratio and the options are bountiful. Choose between 4:3, 5:4, 16:9, 16:10, a wide enough array of aspect ratios for almost every usage pattern.

Calibrating this projector was a snap courtesy the excellently laid out menu. It performed well in DisplayMate with very good contrast and colour. Text quality is sharp and precise. The display on-screen is very sharp. Our movie tests were a lot of fun and we actually ran some of our favourite clips a number of times—amazing contrast, very sharp and accurate colours, and great brightness levels.

The only thing even better than watching movies on the VT800 was playing games on it. And this we all did, for at least half an hour per person!–after which we had to get on with the test. *Crysis* comes to life with some amazing brightness, clarity, contrast and detailing. The price, not withstanding, if you need a projector for gaming, buy this one—you won't regret a whit.



NEC VT595



NEC VT800

At Rs 92,000, it's a little expensive, but it's a brilliant multimedia projector that excels at text and presentations. Although corporates may not need such extensive performance across the board and they certainly won't like the price, this projector is a must have for serious movie and game junkies, and is a superb all-rounder.

NEC VT700
The smaller compatriot of the VT800 is a smaller clone to it in the looks department. It gives up an HDMI port for the more common DVI connect. Remember that HDMI is nothing but a newer standard for DVI video plus an audio




NEC VT700

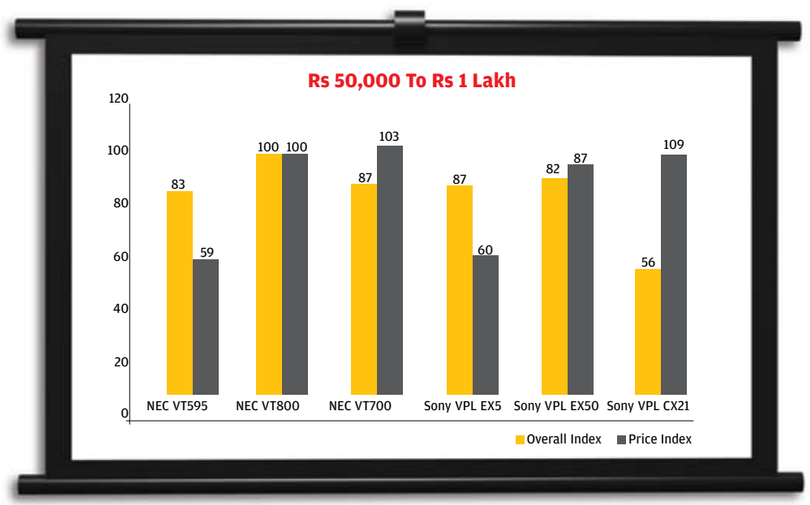

Sony VPL-EX5

stream, so there's nothing much that's different here, although movie junkies would give HDMI a nod over DVI anyday.

It doesn't possess as good a contrast ratio as the VT800, although the colour and geometry was as good as its larger sibling. Text clarity is good, and so is the performance in presentations and animations, although it trails its sibling by a hairsbreadth. The same phenomenon occurs in the movie and gaming tests where the VT800 is slightly better. This is enough for us to recommend the VT800 over the VT700, especially, when you consider that the VT700 is actually Rs 3,000 costlier in India, that is, Rs 95,000. For all your needs, the VT800 is a much better choice as it's cheaper and performs better. However, the VT700 is an excellent projector in its own right, but its pricing needs some adjustment.

Sony VPL-EX5

Sony's design department has come up with a winner as far as looks go. The VPL-EX5 is a beautiful looking projector finished in glossy white. The top body curves down the sides and this tapered shape looks refreshingly different. The remote control is small, and very slim. Aesthetics aside the buttons are the hard-to-press variety, and they're very tiny—all large-handed blokes beware! The zoom and focus adjustments are on the left side of the body and you might miss them (we did initially!) unless you look hard. Sony's menu is well laid out, and everything is easily accessible, although the options aren't as bountiful as the NEC projectors, where you can tinker around more.



This projector is no slouch when performance is the criteria. DisplayMate threw up some good results, very good contrast and colour, but we noted that the reds and greens seem a little too vivid—almost as if these hues are being heightened. This is also typical to Sony digital cameras (pardon the correlation) and we feel that Sony prefers rich, vibrant colours over tonal balance. Photos looked splendid when viewed on this projector—very good colour, and the detail was amazing. Not surprisingly, this is good for watching movies with great detail and crispness. It's a great projector to game on as well. *Crysis* and *F.E.A.R* both looked amazing, and the HDR effects in *Crysis* in particular were beautiful.

Although behind the excellent NEC VT800 in performance, this projector costs a whopping Rs 37,010 less! When you're looking at 95 per cent the performance at 60 per cent the price, you just know you've found something special, and such excellent bang for buck is as rare an occurrence as spotting a dodo. A must buy! We know an amazing deal when we see one!

Sony VPL-EX50

Designed to look identical to the VPL-EX5, the VPL-EX50 adds an extra *zero* as a suffix to its sibling's name and a slightly brighter bulb (2,500 lumens opposed to 2,000 lumens). Once again, build quality is excellent, and the merits and demerits of the VPL-EX50 are also present.


Sony VPL-EX50

In terms of performance, the VPL-EX50 is a solid extension on its already excellent sibling. Whatever the VPL-EX5 does, this bad boy does a little better. Once again the issue with over-saturated, over-rich colours arises, but this can be toned down with a little calibration. Contrast is excellent and the VPL EX-50 performs very well, be it text, presentation or DisplayMate. Likewise, the movie performance was stellar, and while the difference between the two siblings isn't much, you'll notice it. In games, we were greeted with the kind of clarity that does justice to fast and expensive SLI or Crossfire multi-GPU systems.

For Rs 79,990, the VPL-EX50 isn't expensive for what it offers, unless you consider its cheaper sibling. If you want the best, then ditch this in favour of the NEC VT800, but you'll have to spend more. If you are OK with the performance of the VPL EX50, but want to spend less, then you should look at the Sony VPL EX5. Remember that the law of diminishing returns is firmly in place here—the extra five per cent of performance between the two siblings costs a whole lot more.


Sony VPL-CX21

Sony VPL-CX21

The VPL-CX21 is a very compact projector with a fully metallic body. It's built extremely well unfortunately we received this projector without any remote control unit, and minus all the cables. Such exclusions are shocking from Sony. Nonetheless, connectivity options are pretty limited with only D-Sub and Composite as your options. A mini-USB connect acts as an audio / video connect and this is hidden away under a latch, in a small recess, which opens to reveal the menu buttons and a 4-way joystick. Using the menu is a pain, because all the controls are on the side of the projector and not very accessible. With your VGA cable plugged in, it's also difficult to reach the menu buttons.

In DisplayMate, we ran into some minor issues with contrast. Also noticeable were some issues with changes in hue in the *White Shift* and *Black Shift* tests, this shows a phase issue. There were issues with grey rendition, which we weren't able to fix with calibration.

In the text tests, we weren't convinced with quality, sharpness or clarity of alphabets and there seemed to be some haziness around the edges of fonts. The movie tests were kinder to this projector, and we couldn't find a lot to complain about, although, it's not as good as some of the other projectors in this test. Games were a mixed bag. While we couldn't find anything to complain about, we also couldn't find a lot to praise. *Crysis* was clear and with good lighting and colour, but it lacked a little extra sparkle that some of the other projectors were able to display, and clarity was also an issue. At Rs 99,990, the VPL-CX21 is pricey.

Up To Rs 50,000
For Modest Movie Buffs

BenQ MP612c

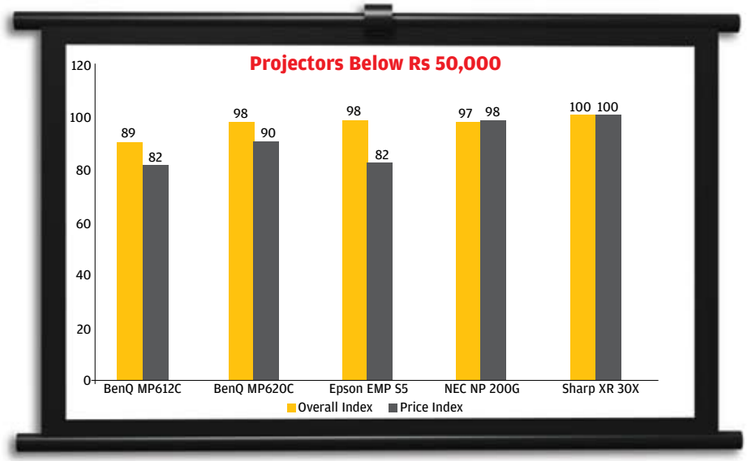
The MP612c is a navy blue (alternating between matte and gloss) finished projector that is more planes and angles, than curves. Yet the design has something of a futuristic look that most of us found pleasing, if not desirable or even appeasing. The remote unit is very small, compact, yet usable. One of the complaints we have with the connectivity is the inclusion of a single 3.5-mm jack to serve as an input, although considering that most users will have discrete speakers, but maybe we shouldn't complain. Note that all the NEC projectors have multiple 3.5-mm audio inputs, usually one for each video connect. DVI connectivity has been missed out on, as is the Component connect, a *de facto* for high-end video devices. A mini-USB connect has


BenQ MP612c

also been provided, and the *de facto* RS232 interface to connect to a PC is also present.

In DisplayMate, we noticed a slight deficit in contrast where this projector lost out on about six cards in the *gray scale intensity* check, where the objective is for the projector to display as many gray cards (that range in intensities from less to very intense) as possible on a pitch black background. This test is a very good indication of contrast ratio, and we've learnt to respect the results it throw up, as they're very indicative of performance in movies and games. Geometry was OK, with some aberrations visible in the left corners, which couldn't be removed by calibration. The colours are good, but seem a little dim or muted, and once we calibrate the projector using DisplayMate, we don't interfere with settings, so this continues throughout the other tests as well. Movie and game tests showed more loss of clarity and colours, which was evident in *Crysis* and a lack of contrast visible in the darker, atmospheric scenes in *F.E.A.R*. The rather soft colours, like watching television with your TV set to *soft* picture mode also detracted from the experience.

At a price of Rs 40,000, the MP612c is nice and cheap, and makes an attractive buy. We suggest you stave off the temptation, and take a look at its slighter costlier sibling featured next.



BenQ MP620c

The bigger brother of the MP612c is a slightly better looking projector. They share a remote unit in common and their menus are not too bad. The build quality, and the navy blue finish is as good as its smaller sibling. The part matte part glossy finish is quite well done and adds character to the product.

In the DisplayMate tests, we found a result similar to the MP612c—a deficit in contrast, which caused it lose out on quite a few grey cards—eight of them in all were indiscernible from the black background. The colour tests proved that BenQ does indeed have softer colours, but the word *dim* seems more apt. We hope BenQ addresses this issue, as it's not really resolvable through calibration and really detracts from any colour related activities like movie watching and gaming. In the text tests, once again some of the text appeared to be a little blurry and the edges of the fonts were once again (*sigh!*) not clearly defined. The MP620c a slightly better projector than its sibling at gaming and *Crysis* was enjoyable, but not as immersive as hardcore gamers would like.

Aimed at the household who wants to upgrade from a large screen TV to a *real* home cinema experience—the MP620c is decent value at Rs 44,000. However, there are better performing options available for nearly the same price point.


BenQ MP620c

Epson EMP-S5

Epson's EMP-S5 is an attractive looking projector finished in (now familiar) glossy white. The front tapers forward, so the device looks rather soft nosed, and the lens is accessible via a slider-type flap mechanism, which when closed, mutes the video and audio signal, in addition to protecting the lens. Epson bundles a small, compact remote unit with this projector with tiny buttons that are surprisingly easy-to-use. On the connectivity front, DVI and Component connects are missing, although USB connectivity is there. The EMP-S5 wireless connectivity, which isn't really significant, as this projector is obviously aimed at home audiences.

In DisplayMate, this projector had minor issues with contrast and also with geometry in the bar resolution tests. In the gray-scale intensity and contrast test, we missed out on eight gray cards, which is a little below our expectations. It performs adequately in the text, animation and photograph tests, no serious complaints here.

We had some great hopes in the movie tests after our last impressions with still images. How wrong we were! The let down is the combination of contrast, brightness and even lack of detail, which leaves a



Epson EMP-S5

somewhat grainy impression noticeable in movies, not something you want when you're shelling out nearly half a lakh for an entertainment system. This graininess also spoils the game test results, and *F.E.A.R* isn't as fearful as we like it to be. *Crysis* is slightly better mainly because its not as dark a game. At Rs 40,100 the Epson EMP-S5 has a better price to performance ratio than either BenQ projectors, and can be recommended over both of them.

NEC NP200G

This was NEC's only DLP offering in our test. The remote control is small, slim and fits into a recess on the top of the body. Despite its tiny size, the remote works beautifully and the buttons are *soft-touch*—flawless design here. The finish is an off-white satin, which looks smart and feels durable. Connectivity options are restricted to D-Sub, Composite and S-Video, no USB or RJ45 goodness here. This is a projector obviously intended for home users primarily, and the small footprint will be an advantage to this audience. Another factor which is useful for its intended audience, especially those with cramped dwellings, is the nature of its lamp—very short throw. This makes it immensely useful if you have very little space between your projector and your screen and still want to project a relatively larger image than what would be possible using a regular lamp.

The NP200G did decently well in DisplayMate, with good performance in the contrast and colour tests. It also does very well at text and presentations, although the slight softness accompanied by loss of detail upon zooming in on photographs is undesirable, and adversely affected its score in our image quality test. It's a good movie projector, and suitable for HD movie watching, thanks to spot-on contrast and colours, and good brightness levels. The gaming tests were a little harsher on this projector and we felt both *Crysis* and *F.E.A.R* could look much better. Basically, the colours didn't seem as vivid as we'd like, and more importantly, the games didn't seem as detailed—some textures looked slightly dull and lifeless. Casual gamers would probably be pleased with the results, but to choose this projector solely for its gaming performance if you're a hardcore gamer would be a folly.



NEC NP200G

At Rs 48,000, the NEC NP200G is a very good projector for its price. Although its siblings, the VT800 and VT700 trounce it soundly, they also command double the price. Hardly any similarly priced projectors come close to its performance and this makes the NP200G somewhat of a golden product in this category... Right? The next product featured may change that impression.



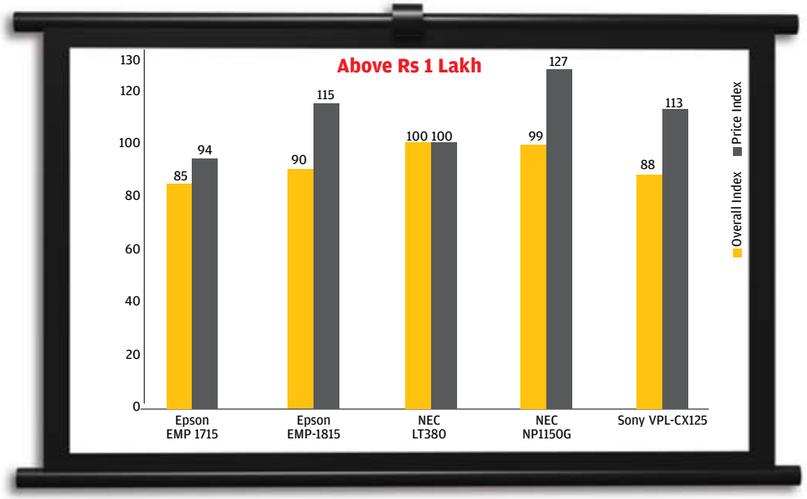
Sharp XR-30X

Sharp XR-30X

The XR-30X is a lovely looking conglomerate of plastic and metal livered in dark gray and black. A strong profile and dark good looks coupled with the fact that this projector is built like a tank. Sharp has done an excellent job of the remote control unit.

The menu system, however, is not intuitive and the background colour used for the menu is very distracting from the colour of the text. Perhaps if the guys at Sharp read this, a revision may sort out this issue which is admittedly minor. Connectivity is good with RJ45 making an appearance along with *both* VGA and DVI connects.

On to DisplayMate's suite, the XR-30X's contrast is pretty good, as is its ability to work with colours. With great performance in the resolution and geometry tests, it was understandable that text quality would be good, but the XR-30X was absolutely excellent! Sharp, clear and precise text with no visible aliasing or anomalies, the clarity was amazing. The quality of photographs was also very good—as good as we've seen from many of the sub



1-lakh rupee projectors, and this is amazing considering this one is present in a lower category. It did very well in *F.E.A.R* thanks to its ability to work with very dark scenes easily and with great detail (a healthy contrast ratio at work here), but we felt there was room for improvement in *Crysis*. The environments looked lovely and so were the effects, but somehow, the NEC VT800 in particular, makes such scenes look much more lifelike, crisp, and the foliage and outdoors look so much more resplendent. To be fair, at Rs 49,000, the XR-30X is nearly half the NEC VT800's price, and for half a lakh rupees, this is the best performing projector we've seen by yards.

Above 1 Lakh

Going To The Movies Will Be Cheaper, But Not As Much Fun

Epson EMP 1715

The EMP 1715 is the smaller alternative to the EMP 1815 and much lighter and compact than its larger sibling. It sports a superb finish and an even better build quality, something we expected from a device in this price category, but it's good to see products live up to their pedigree. At first glance, it seems like a business oriented device with its boxy looks, and the inclusion of wireless LAN and USB connectivity reiterate this fact. RJ45 is missed, as is the inclusion of a card reader, which the elder sibling sports. A shutter system hides and protects the lens and acts as an A/V mute system when closed. It has a small, fat remote unit that works very well. It has a wide angle of functionality from the front and the rear, better than the other projectors in test.

We fired up DisplayMate first. After calibration, a deficient contrast ratio was noticeable. It performed well in the geometry tests and the reverse text tests. Text, although readable, has smudgy, blurry edges, that we didn't like. Although not usually an issue for a multimedia projector, a device aimed at the corporate world, should do well at any sort of text test. Colour quality is quite good with excellent rendition of reds and greens, crisp, vibrant and normal saturation. Although nearly all the mid-range and high-end NEC models do better, we have no complaints.

In our movie tests, we noticed some minor issues with contrast. Other issues existed with clarity of the picture, although brightness and detail levels were quite good. One thing to note about the EMP 1715 is that it doesn't like to work with content that is non-native in terms of resolution. Most projectors don't, but the problem was a little more noticeable with this model. This was most obvious in our gaming and movie tests, due to which gamers and movie junkies may steer clear of this model. At Rs 1,16,600, this projector is certainly expensive enough, not to have such niggling issues! It's clearly a business oriented device. The problem that we have with this, is that a much cheaper model—the XR-30X from Sharp, outperforms it in the text and presentation tests, of importance to corporates, which is why Epson doesn't earn a recommendation from us here.



Epson EMP 1715

Epson EMP 1815

Another boxy looking projector and one that immediately fits the corporate image. It's very well built, and the materials used are top class, although the finish is somewhat uninspiring if not downright unattractive. A large footprint means you better make some serious room for this projector. With both WiFi and RJ45 connectivity, and the inclusion of a Compact Flash (CF) memory slot, the EMP 1815 is very much a corporate projector. USB 'A' and 'B' type connects are also provided. Once again, like its smaller sibling the lens protector doubles as an A/V on-off switch.

DisplayMate showed some issues with resolution, not a good sign for such a high-end projector, although the rest of the tests passed uneventfully. Text wasn't as sharp as we'd like it to be, and this is our major gripe with a corporate product—at least perform in the realm of your expertise for heaven's sake! The same issue the EMP 1715 had crops up here—problems when working with non-native resolutions. Movie junkies and gamers will probably stop reading this review here and jump ahead. Nevertheless, there was also the presence of phase disturbances and *moiré* in the horizontal and vertical bar and line tests to contend with. Thankfully, it has a good contrast ratio.

The movie and game tests were pretty much identical in terms of results to its alternative (the EMP 1715) and for this price, all gamers will jump ship. For Rs 1,42,000, the Epson 1815 is a large projector that does quite a few things well, some decently, and fails to deliver on one or two fronts. At this price point, however, it's perfection you're after, and you won't find it here.

Sony VPL-CX125

A very large and bulky projector to look at, with a superb finish—dark grey looks classy and suave and the quality of materials used by Sony is top class. It's got a large remote control unit that's equally well built and works wonderfully well. For such a high-end device, we bemoan the lack of DVI and component connectivity. Even USB connects have been shockingly omitted, although RJ45 connectivity is present. Also, this device doesn't have any WiFi capabilities, so corporates who use such connectivity options will need to look elsewhere. The menu system with its very slick and ultra usable 4-way joystick is a pleasure to use. In fact, both the options and the ability to control them is so seamless, it's like an iPod Touch as far as human interfacing goes.

The VPL-CX125 handled DisplayMate rather well and besides the presence of some *moiré* and issues with colour shifting, the *White Shift* and *Black Shift* part of the tests, this projector did rather well. It scores well when working with text, and the reverse text performance was also good. No surprise, that photographs look clear and crisp on this projector, ditto presentations. We also enjoyed the movie tests. It does hold its own in any sort of video playback test. In gaming, *F.E.A.R* did well as expected, although there were slight flaws with the contrast and detailing at lower light intensities. In *Crysis* we couldn't spot any flaws. Note that while some NEC projectors did a better job, the VPL-CX 125 isn't bad at gaming. This projector is therefore suitable for multimedia use, but at Rs 1,39,900, the question of investing such a large sum for mediocre performance raises its ugly head. There are better performing, cheaper projectors out there—no offence to the VPL-CX125's great capabilities.

NEC LT380

One of the best looking projectors in test, the LT380, has a rounded, contoured body finished in a satin smooth material with an attractive off-white colour. The front part that houses the lens, protrudes outwards in a curvy manner, giving this projec-



Epson EMP 1815

How We Tested

We divided our lot of projectors on the basis of prices:
1. Up to Rs 50,000
2. Rs 50,000 to Rs 1 Lakh
3. Above Rs 1 Lakh

Features
Here we looked at the basic features that anyone would expect a projector to have. All its specifications are noted by us, but we don't rate them, as they reflect in the performance scores. We did rate features like the presence of optical zoom, and the connectivity options were graded. We gave a lot of importance to the menu layout, as some of you may have to frequently tune your projector for different usage patterns such as movie watching, text presentations, Internet surfing and gaming.

Performance
We calibrated these projectors using DisplayMate Video Edition. After calibrating, we ran Display Mate's own suite through them to test various parameters. For our text and presentation tests, we used MS Word and PowerPoint 2007. For our movie tests, we used at least ten different clips, half of which were native 720p and the others were 1080p clips. We also used two DVD movies.

For our gaming tests, we used three games, although we only rated two of them—*Crysis* and *F.E.A.R.* to avoid making the test game heavy. The third game we used was *S.T.A.L.K.E.R.*, because it mixes gloomy outdoors with some great environment effects.

Test Rig Configuration

Processor	Intel Core 2 Duo E6700
Motherboard	Gigabyte P965 DQ6
RAM	Kingston 3GB DDR2 800 MHz
Graphics Card	NVIDIA GeForce 8800GTX
OS	Windows XP Professional SP3

Digital Tools | **Projectors Test**

Projectors	**Projectors Up To Rs 50,000**					**Projectors Under Rs 1 Lakh**					
Brand Model	**BenQ MP612c**	**BenQ MP620c**	**Epson EMP-S5**	**NEC NP200G**	**Sharp XR-30X**	**NEC VT595**	**NEC VT800**	**NEC VT700**	**Sony VPL-EX5**	**Sony VPL-EX50**	**Sony VPL-CX21**
Price (Rs)	Rs 40,000	Rs 44,000	Rs 40,100	Rs 48,000	Rs 49,000	Rs 54,000	Rs 92,000	Rs 95,000	Rs 54,990	Rs 79,990	Rs 99,990
Plus (+)	Compact	Well built	Well built	Very compact	Good performer	Good looks	Excellent performer	Good performer	Looks good	Looks good	Well Built
Minus (-)	Lacks performance	Lacks performance	Boxy look	Lacks performance	Slightly bulky	Lacks performance	Slightly pricey	Overpriced	None in particular	Slightly costly	Very Bulky
Grand Totals (Out of 100)	62.03	67.72	67.96	67.42	69.34	70.09	84.34	73.17	73.12	69.13	47.30
Features (Out of 45)	26.48	30.26	33.12	28.73	26.78	31.39	40.34	30.71	31.32	26.82	8.06
Performance (Out of 55)	35.54	37.45	34.84	38.69	42.57	38.71	44.00	42.46	41.80	42.31	39.24
Features											
Projection System (DLP / LCD / LCOS / CRT)	DLP	DLP	LCD	DLP	DLP	LCD	LCD	LCD	LCD	LCD	LCD
Native Resolution (Pixels)	800 x 600	1024 x 768	800 x 600	1024 x 768	1024 x 768	1024 x 768	1024 x 768	1024 x 768	1024 x 768	1024 x 768	1024 x 768
Brightness (ANSI Lumens)	2200 lumens	2000 lumens	2000 lumens	2100 lumens	2300 lumens	2000 lumens	2700 lumens	3000 lumens	2000 lumens	2500 lumens	2100 lumens
Contrast Ratio	2000:1	700:1	400:1	1300:1	2200:1	600:1	500:1	500:1	300:1	300:1	300:1
Optical Zoom (Y / N)	✗ / 1.15x	✗ / 1.15	✗ / 1.35x	✓ / 1.3x	✗ / 1.15x	✓ / 1.2x	✓ / 1.2x	✓ / 1.2x	✗ / 1.2x	✗ / 12.x	✗ / 1.16x
Image Size (Max-Min) (Inches)	24 - 300 inches	31 - 300 inches	30 - 300 inches	27.5 - 302.8 inches	40 - 200 inches	21 - 300 inches	43.5 - 305.5	21 - 300 inches	40 - 300 inches	40 - 300 inches	40 - 300 inches
Throw Distance (Min-Max) (metres)	1 - 10 metres	1 - 10 metres	0.9 - 10.4 metres	1.2 - 12 metres	1.7 - 7.5 metres	0.7 - 11.1 metres	1.5 - 9.1 metres	0.7 - 10.7 metres	1.4 - 8.8 metres	1.4 - 8.8 metres	1.22 - 10.67 metres
Lamp (Hours) (Normal / Eco mode)	3000 / 4000 hrs	3000 / 4000 hours	3000 / 4000 hrs	3500 / 4000 hrs	2000 / 3000 hrs	2000 / 3000 hrs	2000 / 3000 hrs	2000 / 3000 hrs	2000 / 3000 hrs	2000 / 3000 hrs	2000 / 3000 hrs
Horizontal Frequency (KHz)	31 - 82 KHz	31 - 82 KHz	15 - 92 KHz	31.35 - 80 KHz	15 - 70 KHz	15 - 100 KHz	15 - 108 KHz	15 - 100 KHz	19 - 92 KHz	19 - 92 KHz	19 - 92 KHz
Vertical Scan Rate (Hz)	48 - 85 Hz	48 - 85 Hz	50 Hz - 80 Hz	56 - 85 Hz	45 - 85 Hz	50 - 120 Hz	48 - 120 Hz	50 - 120 Hz	48 - 92 Hz	48 - 92 Hz	48 - 92 Hz
Video Input (S-video, Composite, Component, D-Sub, DVI, HDMI)	✓ / ✓ / ✗ / ✓ / ✗ / ✗	✓ / ✓ / ✗ / ✓ / ✓ / ✗	✓ / ✓ / ✗ / ✓ / ✗ / ✗	✓ / ✓ / ✗ / ✓ / ✗ / ✗	✓ / ✓ / ✗ / ✓ / ✓ / ✗	✓ / ✓ / ✗ / ✓ / ✓ / ✗	✓ / ✓ / ✗ / ✓ / ✗ / ✓	✓ / ✓ / ✗ / ✓ / ✓ / ✗	✓ / ✓ / ✗ / ✓ / ✗ / ✗	✓ / ✓ / ✗ / ✓ / ✗ / ✗	✗ / ✓ / ✗ / ✓ / ✗ / ✗
USB Connectivity (Y / N)	✗	✓	✓	✗	✓	✗	✓	✗	✗	✗	✗
Audio Inputs (PC Stereo, RCA L/R) / Speakers (Mono / Stereo)	✓ , ✗ / Mono	✓ , ✗ / Mono	✓ , ✓ / Mono	✓ , ✗ / Mono	✓ , ✓ / Mono	✓ , ✓ / Mono	✓ , ✓ / Mono	✓ , ✓ / Mono	✓ , ✗ / Mono	✓ , ✗ / Mono	✗ , ✗ / Mono
PC Control Terminal (Y / N)	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✗
Maximum Power Consumption	285 watts	285 watts	231 watts	228 watts	283 watts	255 watts	310 watts	295 watts	225 watts	260 watts	220 watts
Rated Noise (dB) (Max)	31 dB	28 dB	31 dB	36 dB	33 dB	34 dB	36 dB	35 dB	33 dB	33 dB	41 dB
Weight (kgs)	2.5 kgs	2.67 kgs	2.6 kgs	2.3 kgs	2.9 kgs	3 kgs	3.7 kgs	3.1 kgs	2.9 kgs	3 kgs	1.87 kgs
OSD Menu Layout And Usability (Scale Of 10)	7.5	7.5	7	7.5	6	7.5	8.5	8.5	8	8	NA
Digital Keystone	✗	✗	✓	✗	✗	✗	✓	✗	✓	✗	✗
Remote Control	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗
Performance											
Display Mate Video Edition (Scale Of 10)											
Sharpness And Resolution											
Horizontal / Vertical Bar Resolution	6.5 / 6.5	6.5 / 6.5	6.5 / 6.5	7.5 / 7	7.5 / 7.25	6.75 / 7	7.5 / 7.5	7.5 / 7.5	7.25 / 7	7.25 / 7.25	6.25 / 7
Corner Resolution	6.5	6.25	7	7.25	7.5	7	7.5	7.25	7	7.25	7
Focus / Fine Focus / Diagonal Focus Matrix	6.25 / 6.25 / 6.5	6.25 / 6.5 / 6.75	6.5 / 6.75 / 6.75	7 / 7.25 / 7.25	7.25 / 7.25 / 7.5	6.75 / 7 / 6.5	7.75 / 7.5 / 7.5	7.5 / 7.5 / 7.5	7.25 / 7.25 / 7.5	7.5 / 7.5 / 7.25	7 / 7 / 7
Moire Pattern	5.5	5.75	6.25	7.75	7	7	8	8	7	7	6.75
Screen Pixel Resolution	6	6.5	7	7.25	7.5	6.75	7.5	7.5	7.5	7.5	7.25
Color And Gray Scale Tests											
Streaking And Ghosting / Colour Streaking	6.5 / 6.25	6.25 / 6.5	6.75 / 6.75	7.5 / 7.25	7.5 / 7.5	6.5 / 7	7.5 / 7.5	7.25 / 7.25	6.75 / 7	6.75 / 7	7.25 / 7
16-intensity Levels	6	6	6.5	7.75	7.75	6.75	7.75	7.25	8	7.75	7.5
White / Black Level Shift	6.5 / 6.25	6.25 / 6.25	6.5 / 6.5	7.5 / 7.5	7.5 / 7.5	7 / 6.75	7.5 / 7.5	7.5 / 7.5	6.25 / 5.5	6.25 / 6.25	6.5 / 6.5
Red / Green / Blue Colour Purity	6 / 6 / 6	6 / 6.5 / 6.75	6.25 / 6.5 / 6.25	7.5 / 7.5 / 7.5	7.5 / 7.5 / 7.75	7.25 / 7 / 7	7.75 / 7.75 / 7.5	7.5 / 7.5 / 7.5	7.75 / 7.75 / 7.75	7.75 / 7.75 / 7.5	6.75 / 6.5 / 6.75
Miscellaneous Effects (Scale Of 10)											
Screen Uniformity / Flicker / ANSI Brightness, Contrast	6.25 / 6 / 6	6 / 6.5 / 6.25	6.75 / 6.75 / 6.5	7.25 / 7.25 / 7.25	7.5 / 7.25 / 7	7.5 / 7.25 / 6.75	7.75 / 7 / 7.25	7 / 6.75 / 6.75	6.5 / 6.25 / 6.5	6.75 / 6.5 / 6.5	6.25 / 6 / 7
Defocusing, Blooming And Halos	6	6.5	6	7	7	6.75	7	7	6.5	6.5	7
Presentation Tests (Scale Of 10)											
Text / Reverse Text Quality (P Mode)	6.5 / 6	6.75 / 6	5.75 / 6	7.25 / 7.5	8.75 / 7.75	6.75 / 6.75	8.5 / 7	8 / 7	7.75 / 7.25	8 / 6	6.5 / 6.5
Quality Of Photographs / Animation	6.5 / 6.5	6.75 / 6.5	6.25 / 6.25	6.5 / 6.75	8.25 / 7.75	7.5 / 7.5	8.25 / 7.5	8 / 7.5	8.25 / 7.25	8.25 / 7.75	7.5 / 6.75
Movie Tests (Scale Of 10)											
Brightness And Contrast / Crispness, Detail	6.5 / 7	6.75 / 7.5	6.5 / 6.5	7.5 / 7.5	7.75 / 8	7 / 7.25	8.25 / 8.5	8 / 8	8 / 8.25	8 / 8.25	7.5 / 7.5
Game Quality Tests											
F.E.A.R.											
Effects Quality / Sharpness And Detail	6.75 / 6	7.25 / 7	6.5 / 6.25	6.75 / 6.5	7.75 / 7.5	7 / 7	8 / 7.75	7.75 / 7.5	7.5 / 7.5	7.75 / 7.5	7.5 / 7.25
Crysis											
Effects Quality / Sharpness & Detail	6.75 / 6.5	7.25 / 6.75	6.25 / 6.25	6.75 / 6.75	7.25 / 7.5	7 / 7	8.25 / 8.25	7.75 / 8	7.75 / 7.5	8 / 7.75	7.5 / 7
Warranty	2 years	2 years	2 years	2 years	2 years	2 years	2 years	2 years	1 year	1 year	1 year

BEST BUY digit JULY 2008

Projectors	Projectors Above Rs 1 Lakh				
Brand Model	**Epson EMP 1715**	**Epson EMP-1815**	**NEC LT380**	**NEC NP1150G**	**Sony VPL-CX125**
Price (Rs)	Rs 1,16,600	Rs 1,42,000	Rs 1,24,000	Rs 1,58,000	Rs 1,39,900
Plus (+)	Well Built	Well Built	Great Performance	Great Connectivity	Well Built
Minus (-)	Lacks Performance	Very Expensive	Slightly Overpriced	Bulky and Heavy	Very Bulky
Grand Totals (Out of 100)	71.06	75.61	83.90	81.15	73.89
Features (Out of 45)	33.12	36.43	40.17	37.87	31.32
Performance (Out of 55)	37.94	39.19	43.73	43.29	42.57
Features					
Projection System (DLP / LCD / LCOS / CRT)	LCD	LCD	LCD	LCD	LCD
Native Resolution (Pixels)	1024 x 768	1024 x 768	1024 x 768	1024 x 768	1024 x 768
Brightness (ANSI Lumens)	2700 lumens	3500 lumens	3000 lumens	3700 lumens	3000 lumens
Contrast Ratio	400:1	500:1	600:1	600:1	650:1
Optical Zoom (Y / N)	✘ / 1.2x	✘ / 1.6x	✔ / 1.2x	✔ / 1.2x	✘ / 1.16x
Image Size (Max - Min) (Inches)	30 - 300 inches	30 - 300 inches	21 - 300 inches	30 - 500 inches	40 - 300 inches
Throw Distance (Min - Max metres)	1 - 12.1 metres	0.8 - 14.7 metres	0.53 7.62 metres	0.76 - 12.7 metres	1.4 - 9.1 metres
Lamp (Hours) (Normal / Eco mode)	2000 / 3000 hrs	2500 / 3000 hrs	2000 / 3000 hrs	2000 / 3000 hrs	2000 / 3000 hrs
Horizontal Frequency (Khz)	15 - 92 KHz	15 - 99 KHz	15 - 100 KHz	15 - 108 KHz	19 - 92 KHz
Vertical Scan Rate (Hz)	50 - 85 Hz	50 - 120 Hz	48 - 120 Hz	48 - 120 Hz	48 - 92 Hz
Video Input (S-video, Composite, Component, D-Sub, DVI, HDMI)	✔ / ✔ / ✘ / ✔ / ✘ / ✘	✔ / ✔ / ✘ / ✔ / ✘ / ✔	✔ / ✔ / ✔ / ✔ / ✔ / ✘	✔ / ✔ / ✔ / ✔ / ✔ / ✘	✔ / ✔ / ✘ / ✔ / ✘ / ✘
USB Connectivity (Y / N)	✔	✔	✔	✔	✘
Audio Inputs (PC Stereo, RCA L/R) / Speakers (Mono / Stereo)	✔ , ✘ / Mono	✔ , ✔ / Mono	✔ , ✔ / Mono	✔ , ✔ / Stereo	✔ , ✘ / Mono
PC Control Terminal (Y / N)	✔	✔	✔	✔	✔
Maximum Power Consumption	228 watts	286 watts	292 watts	460 watts	285 watts
Rated Noise (dB) (Max)	38 dB	36 dB	35 dB	33 dB	32 dB
Weight (kgs)	1.7 kgs	3.1 kgs	3.5 kgs	7.3 kgs	4.1 kgs
OSD Menu layout and Usability (Scale of 10)	8	7.5	8.25	8.5	9
Digital Keystone	✔ (Vertical Only)	✔	✔	✔	✔
Remote Control	✔	✔	✔	✔	✔
Performance					
Display Mate Video Edition (Scale Of 10)					
Sharpness And Resolution					
Horizontal / Vertical Bar Resolution	6.5 / 6.5	6.75 / 6.75	7.5 / 7.5	7.75 / 7.5	7.5 / 7.5
Corner Resolution	6.75	7	7.5	7.75	7.5
Focus / Fine Focus / Diagonal Focus Matrix	6.5 / 6.5 / 6.5	7 / 7 / 7	7.5 / 7.5 / 7.5	7.5 / 7.5 / 7.75	7 / 7 / 7
Moire Pattern	6.5	6	7.25	8	6.75
Screen Pixel Resolution	7	7.75	7.25	7.75	7.5
Color And Gray Scale Tests					
Streaking And Ghosting / Colour Streaking	6.5 / 6.5	7 / 7.25	7.5 / 7.5	7.5 / 7.5	7 / 7
16-intensity Levels	7.25	7.75	7.75	7.25	8
White / Black Level Shift	7 / 7	7 / 7	7.5 / 7.5	7.5 / 7.5	6.5 / 6.25
Red / Green / Blue Colour Purity	7.5 / 7.25 / 7	7.75 / 7.5 / 7.75	8 / 7.75 / 7.5	7.25 / 7.75 / 7.5	7.75 / 7.75 / 7.5
Miscellaneous Effects (Scale Of 10)					
Screen Uniformity / Flicker / ANSI Brightness, Contrast	6.75 / 6 / 6.25	7.5 / 7.25 / 7.25	7.75 / 7.25 / 7.25	7.75 / 7 / 7.5	7 / 6.5 / 7
Defocusing, Blooming And Halos	6.5	6.5	7	7	7
Presentation Tests (Scale Of 10)					
Text / Reverse Text Quality (P Mode)	7 / 7	7 / 7.25	8.5 / 7.5	8.25 / 7.5	8 / 7.5
Quality Of Photographs / Animation	7 / 7	8 / 7.5	8.25 / 7.75	8.25 / 8	8 / 7.5
Movie Tests (Scale Of 10)					
Brightness And Contrast / Crispness, Detail	7.25 / 7.25	7.5 / 7.5	8.25 / 8.25	8.25 / 8.5	8 / 8
Game Quality Tests					
F.E.A.R.					
Effects Quality / Sharpness And Detail	7 / 7	7 / 7	7.75 / 8	8 / 8.25	7.75 / 7.75
Crysis					
Effects Quality / Sharpness And Detail	6.75 / 6.25	6.75 / 6	8 / 8.25	8.25 / 8.25	8 / 8
Warranty	2 years	2 years	2 years	2 years	1 year



NEC LT380

tor a distinct look, that is both muscular and stylish. PC card connectivity is something we're seeing for the first time. The *de facto*, (for a high-end projector), USB and RJ45 connects are provided. Component connectivity is another plus for video enthusiasts who usually hate low quality Composite connects. S-Video, VGA and DVI connectivity is also present, and the fully functional and stylishly contoured remote control gives the impression of this being a packed-to-the-gills solution. For PC control, a serial interface has been provided.

This projector trounced DisplayMate and chalked up some scores for which nobody had any criticism. Text quality is sharp, clear and precise with well defined fonts. Movie quality is simply mind-blowing—neck and neck with the VT800, and HD movies are a ton of fun on this projector. Likewise, gaming is immersive, and if you're a hardcore gamer who wants something feature-rich, then the LT380 is highly recommended. *Crysis* comes to life with simply amazing detailing, colour and contrast.

At Rs 1,24,000, the NEC LT380 is the upper echelon of home entertainment. It's a more balanced solution than NEC's own VT800 with an additional connectivity option at the loss of an HDMI port, which at this price point, should be included. Sorry to complain NEC, but you've slipped up here. We can't recommend the LT380 over its sibling for a home theatre system, as there's nothing to choose from on the performance front, though there's a rather large price difference of Rs 30,000 between them.

NEC NP1150G

The colossal NP1150G is being reviewed last, not because it's the costliest projector on test, but because it is by far the heaviest (7.3 kgs), with no one wanting to heft it out of its packaging! It's got a mock metallic finish on the sides with piano white plastic on the top part of the body and gray and a glossy white splashed every where else. Needless to say, it's huge, but it's still well shaped. The sheer bulk won't please many. The body shape is reminiscent of the VT800—only larger. Display Connectivity includes D-Sub, DVI, Composite, Component, S-Video and a (hardly used) five connector BNC digital coaxial input that's labelled "For Computer". These five BNC connects can also be used with Component connectivity. USB and RJ45 connects are also provided. Finally, this projector features *stereo* speakers, and the volume output is pretty impressive for a projector.



NEC NP1150G

DisplayMate was a breeze, with the large NP1150G just warming up to the challenge. It's got brilliant image quality with photos, animations and presentations looking amazing. Text quality is good, and is only surpassed by the excellent Sharp XR-30X. Fire up a movie, and you can really relax in front of this beauty. With a 3700-lumen brightness rating and a contrast of 600:1, the NP1150G is special when it comes to delivering cinematic-like quality inside your living room, or wherever you choose to place it.

For games, it's a mixed bag. Sure it was excellent, but there were places when we felt its cheaper siblings, the LT380 and VT800 outdo it. However, for the most, it was a much better performer, and we spent hours playing *Crysis* and *S.T.A.L.K.E.R.* on this one. *F.E.A.R.* comes to life, replete with scary effects, realistic shadows, and some amazing weapon detailing. The atmospheric essence of this game is exceptionally well captured.



For its versatility, connectivity options, build quality, and performance, the NP1150G is an amazing projector. No wonder then, that its price also brings with it the most audible "Ouch!". At Rs 1,58,000, we figure this beauty is a beast that faces serious threat from its leaner, meaner siblings—but nobody else. If you are intent on coughing up this much dough for a home entertainment system, we advise you to buy one of its cheaper siblings mentioned above, and invest in a better set of surround sound speakers than the ones you have planned. Spend wisely, don't just spend. ■

michael.browne@thinkdigit.com

Contact Sheet Projectors

Brand	Company	Phone No	E-mail	Web site
BenQ	BenQ India	+91-11-43531700	sales.enquiry.in@benq.com	www.benq.co.in
Epson	Epson India Pvt. Ltd.	+91-80-30515023	emp@eid.epson.co.in	www.epson.co.in
NEC	NEC India Pvt. Ltd.	+91-11-46570000	enquiries@necindia.in	www.nec-display.com/ap
Sharp	Sharp Business Systems (I) Ltd	+91-9821067901	dhiren@mum.sharp-oa.com	www.sbsil.com
Sony	Sony India Pvt Ltd	1-800-11-11-88	sonyindia.care@ap.sony.com	www.sony.co.in



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Tech Careers

Trail of Bytes

Bhaskar Sarma

While instances of crime in the cyber space shoot up, demand for forensic experts also increase. We explore the options

Mention crime, and we think of robberies, murders and detectives examining the scene, interrogating witnesses and finally nailing the guilty.

There is, however, another kind of crime, where traditional methods of criminal investigation fall flat on its face. Instances like hack attacks, cyber fraud, phishing, identity and data theft, all account as cyber crime. Even though it may appear that the effects of digital crime are not life threatening, they have the potential to disrupt life, as well as tamper with property. Just imagine, a situation if Indian Railway's ticket reservation system goes down for even a day? In fact, a survey in UK concluded that people were more scared of their bank accounts being hacked or credit card details stolen over the Internet, than they were of muggings and robberies.

We could go on and on about different scenarios, but the point is, digital crime occurs. While better information security would certainly act as a deterrent, crime can never be totally eradicated. So, the next best thing to do, is to find out the culprit. When the crime committed is related to the Internet and computers, then cyber forensic expert enter the scene, and try to sniff out the clues, and trace the byte-trail that can help in catching the perpetrators.

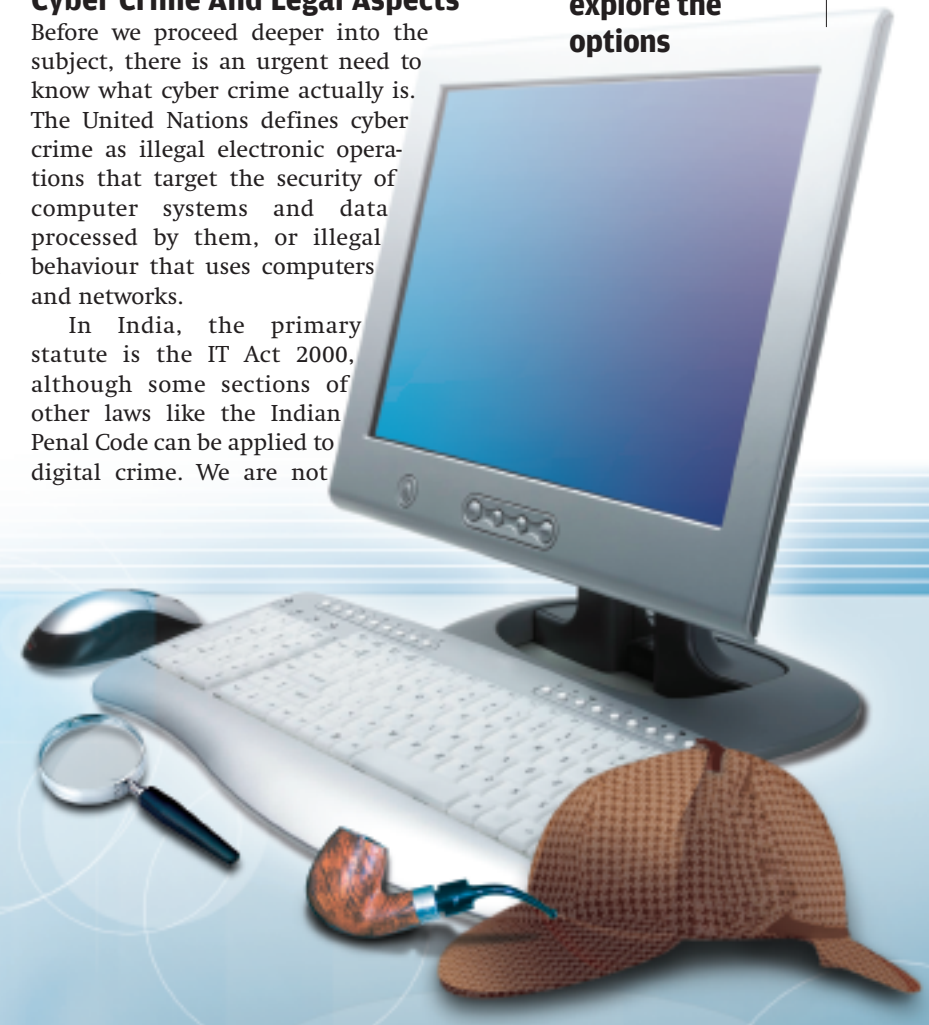
On The Job

Digital forensics, of which cyber forensics is one facet, is a vast discipline, which encompasses several other fields. A digital forensic expert is supposed to be adept in network security, because most cyber crimes take place over networks. He / she needs to be good at encryption and data recovery too, because passwords and data are always inevitably involved in theft of information. Awareness of cyber laws are also important, as most of these cases can go to court where the forensic expert would be called either as a witness for prosecution or defence. Again, cyber forensics does not necessarily mean that its practitioners would have to deal with computers and servers all the time. Depending on cases, mobile phones, pen drives and in some cases, even personal media players have come under the scanner of the e-sleuths.

Cyber Crime And Legal Aspects

Before we proceed deeper into the subject, there is an urgent need to know what cyber crime actually is. The United Nations defines cyber crime as illegal electronic operations that target the security of computer systems and data processed by them, or illegal behaviour that uses computers and networks.

In India, the primary statute is the IT Act 2000, although some sections of other laws like the Indian Penal Code can be applied to digital crime. We are not



going to list out the provisions of the IT Act that are concerned with cyber crime. However, acts like hacking, identity theft, phishing and spamming all become cognizable offences, punishable by fine and prison terms.

Understandably concerned, the government and the private sector have done their bit in trying to educate police and judiciary in new paradigms and technologies. NASSCOM has four cyber labs across the country, and is involved in a government project to train state police departments in state-of-the-art digital investigation techniques. However, with crime rates soaring, these efforts may not be sufficient. The Indian IT and ITeS sectors urgently need solutions to these problems, as the industry deals with highly sensitive, and often, personal data.



> **A certified Cyber Forensics expert can work as a Cyber Forensics expert in Cyber Crime Investigation (CCI) and also as a Data Recovery expert"**
>
> **Jaya Narayanan**
> VP, NJY

Skills And Tools

When it comes to corporate houses, they don't really tend to trust cops a lot. They guard their data fiercely and don't like others messing up on their turf. Also, the process of recording evidence after a digital crime has been committed is a lot like walking on eggshells without making a sound—a single data packet missing out of millions, one electron with a magnetic pole askew, and the data would not stand up to legal scrutiny. To recover data from the crime scene, to analyse and map the course of events to non-technical persons, including your bosses and maybe a judge, is the daily job description of a digital forensic expert.

Every job has its tools and the job of a digital detective is no exception. Cyber forensic tools are software packages that can be used to preserve the state of hard disks and storage devices, extract data from mobile phones and sniff out network packets. As with other kinds of software, there is both open source as well as proprietary software. Many companies also use tools that are tailor-made to their specific needs. Some types of tools are En-Case, X-Ways Forensics and Cyber Examiner. In India, the Resource Centre for Cyber Forensics (RCCF), a part of C-DAC (Centre for Development of Advanced Computing) is in charge of developing tools used by police departments and cyber crime cells. Professionals in this field are expected to be proficient in usage of more than one of these tools.

Institutes Offering Courses In Cyber Forensics

Dept of Criminology, University of Madras	(http://www.unom.ac.in/
Indian Institute of Information Technology, Allahabad	http://www.iiita.ac.in/
C- DAC, Trivandrum	http://www.cyberforensics.in/
Cyber Law College, Chennai	http://www.cyberlawcollege.com/
National Institute of e-Forensics, Mumbai	http://www.nief.in/
Asian School of Cyber Laws Pune	http://www.asianlaws.org/

Degrees And Colleges

As mentioned earlier, the field of cyber forensics is still evolving. Hence, there is a lot of confusion on the part of students who are interested in pursuing this particular career option. To be good, students in digital investigation need to master various disciplines. Not only should they be comfortable with running a hash analysis of files, they would also need to know the legal procedures of presenting evidence in court. It's a mixture of being a cop and a geek, which is challenging and fun to interested and committed professionals. Jaya Narayanan, from the security consulting firm NJY hits the bull's eye, "What we would like to suggest to those individuals who have done, and are currently doing, a course in Cyber Forensics is to also do other various IT courses to support their career and to give their career a strong foundation".

For instance, a cyber forensic individual would always invariably have to work on computer networks, as well as network security. This means that network security certifications are essential for the candidate to be considered for this post. As a representative of Valiant Technologies, a Chennai-based information security-consulting firm affirms, certifications like CCNA (Cisco Certified Network Associate) Security and CCSP (Cisco Certified Security Professional) are good starting points.

Knowledge of networking is also stressed a lot by Dr R. Thilagaraj, head of department of Criminology at University of Madras. This department runs two popular courses related to cyber forensics. One is MSc in Cyber Forensics and Information Security (two years) and the other is Diploma in Cyber Crime and Information Security (one year). Started in 2004, with financial aid from the University Grants Commission, the Masters courses are open to candidates having BSc degrees in maths, physics, statistics, computer science or BE / BTech degrees. Apart from this, it is mandatory to clear a qualifying test. Further information about the course can be obtained from the University of Madras homepage (**http://www. unom.ac.in/**). It might be tough to get admission in the course, as the number of seats is only 20.

Another reputed institute that has been at the forefront of training newbies in cyber forensics is C-DAC. However, most of its teaching efforts are focussed on the government sector, as it is one of the agencies entrusted with bringing the law enforcement authorities up to speed with the latest in cyber crime. However, C Balan, deputy director, RCCF says, "We have plans to start cyber forensic courses for students in the near future. Initially they will start out of Trivandrum, but later will be rolled out across the country."

In the private sector, there are institutions that offer courses in cyber forensics along with information security. Some others also specialise in giving short terms courses in cyber law with emphasis on information security. Asian School of Cyber Laws at Pune is one, Cyber Law College Chennai is another. As of today, there is hardly any industry standard certification or standards in the field of digital forensics. Before they decide to spend their money and time, they should do a thorough research on the background. In particular, they should check the employability status of the alumni and decide whether the training provided is good enough for the industry. Look at the box on the previous page for a list of institutions that offer courses related to cyber forensics.

Career Paths

A career in cyber forensics can be sought both in public, as well as in the private sector. In the public sector, people are mostly absorbed into law enforcement agencies like the cyber crime cells, state forensic departments and central agencies like the CBI. However, regular and mass recruitment of freshers may not be possible, because government departments focus more on training existing employees rather than hiring new people.

However, the scope for employment in private sector is immense. According to a NASSCOM report, 20,000 cyber security professionals would be needed to detect and solve cyber crimes. A bulk of these people would be needed by banks, financial institutions, consulting companies—basically any entity that has valuable data. "In India most banks have their own Fraud Management Cells, which is where people with these skills are the most needed," says Dr Sachin Pandey, CEO of Agape Inc—the company that runs NIeF.

Besides, all the big IT companies have their own computer emergency response teams (CERT) who are responsible for internal IT security and usually the first line of defence against any external attack. Additionally, there are specialist companies that work on ethical hacking, cyber forensics and IT security. The career path is usually from engineer to principal or lead security consultant. In terms of salaries, freshers get about Rs 30,000 to Rs 50,000 more per annum than other entry-level positions. As with other positions in the IT industry, there are plenty of overseas opportunities. After sufficient experience, professionals can branch out into freelancing and become independent security consultants.

A cyber forensic professional's job is very important. It's also very challenging, and provides enormous scope for learning new technologies. The security landscape is changing continuously and unlike traditional crime busting, something happening thousands of miles away can have immediate impact on IT security parameters at your office or company. Only someone who has an active and alert mind with an attitude to constantly learn new things can succeed in this field. ⊠

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No more struggles in charging your mobile phone while on the go... sounds interesting. We met some guys, who are bringing this task to practical reach.

Revolution For Change... and Charge!

Jiten Gandhi

Nash David

Actions speak louder than words, or so they say—precisely what the trio from our very own IIT Bombay believes. We all know of the implications of energy resources getting exhausted and the resultant rise in electricity costs. Most of us, wish we had better ways to stay live and kicking with our gadgets, without the need to constantly plug them into the AC mains sockets. There's now reason to smile, there's hope coming our way.

Making A Difference

We met Ankit Mehta (25), Ashish Bhat (24) and Rahul Singh (24), who have come together to form a start up focussing on energy solutions for your gadgets. "Our aim is to be a company that gives the consumer the freedom of walls-free charging", according to Mehta, Managing Director of ideaForge, who heads the firm's attempt to provide a typical user like you, the freedom to charge your mobile phone, anytime, anywhere—be it in office, sitting idle in a park or even while travelling on your bike.



Bike charger in use. Now get your phone charged even while travelling

The Company

As we caught up with the team incubated at the Kanwal Rekhi School of Information Technology in the IIT Bombay campus, Mehta shed light on the way the team met, came together, got organised and managed the design and launch of their products. It all started somewhere in 2004, in IIT Bombay, where they casually interacted among themselves. The initial plan to work on energy solutions, was conceived a couple of years later, in 2006. As the drive to innovate got the better of them, they decided to get their acts together and in the summer of 2007, formed ideaForge in its current form.

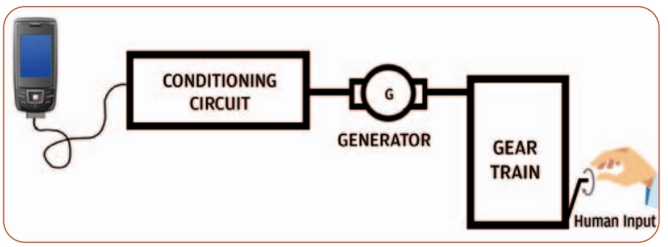
Finances came in the form of Technopreneur Promotion Programme (TePP), a government body that promotes innovative technology start-ups. Other than that, there were personal funds in addition to an angel investor.

Their Products

ideaForge has developed three useful products for the Indian market. A USB-powered mobile charger, a hand-cranking or mechanical phone charger and a two-wheeler solution for mobile phone charging. They have profiled their market into two segments—urban and rural. As per their study, the penetration of Nokia, Sony Ericsson and Motorola is higher in the urban areas, while that of LG and Samsung is higher in the rural areas. Accordingly, they have packaged their chargers with adapters for phones depending on the market they will be shipped to. With the adapters that they provide in their packaging, you are able to charge 90 per cent of mobile phones commercially available in the market, without any additional accessories. In the event that your phone's adapter is not available, they are open to helping you out in that area too.

We checked out their USB chargers back in our office for the whole month while we were working on this article, and it worked really well. While in office, all you need to do is plug in the phone to the USB charger with the other end plugged in to the USB port of your laptop or

PC. The second product was fun playing with. Priced at Rs 450, the hand-cranking charger is what caught our attention the most. It has a comfortable rubber grip and a smooth crank wheel, which isn't cranky to use. Alternatively, you can also rotate the wheel by dragging the charger across any even surface. With all its mechanism, it weighs a modest 110 grams—we had it weighed out of our curiosity.



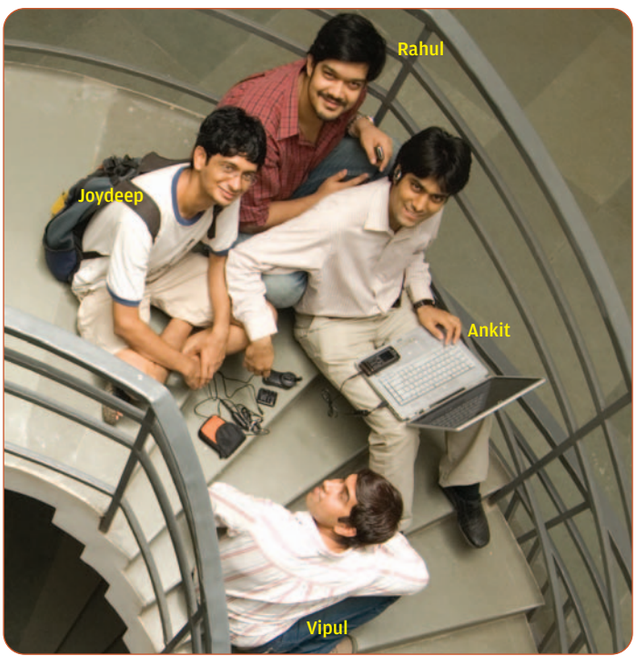
A very simple mechanism at your aid

We asked them about the mechanism of the hand-cranking charger, so that you could understand it better. Well, it's not rocket science, but simplified engineering at work. The handle of the charger connects to a gear train, which drives a generator system. The output of the generator is passed through a conditioning circuit. After going through the voltage regulator, you get pure DC at the specified voltage and current ratings.

The mechanical charger has two modes of operation—one is the Wind-up mode and the other is the Roll-on mode. With the roll-on mode, you can roll the charger wheel to and fro on any surface, such as your thigh while sitting and having a conversation over your mobile phone. This feature enables single hand operation to charge mobile phones—no more fishing for battery power!


Don't have to carry bulky chargers to work anymore

Their third product—the bike-powered charger, is another innovative idea. All you need to do is to connect the two wires at the end of the charger's cable to a connector present after the ignition of your bike. On the other end is the jack with the adapter for your phone, and you are ready to charge while travelling to and fro your home, office or college.



Company Plans

ideaForge seem focussed on reaching the extended rural Indian market. They claim to be on the verge of some strategic tie-ups with leading cellular operators of India, so that they have a wide distribution network. Further, their products are also available in major outlets such as RPG Cellucom, Hot Spot, the Mobile Store, Indiatimes shopping, eBay and Storrz. Our first apprehension, when we heard of their products was their Chinese counterparts. But as they believe, they are not here to compete with Chinese products. They believe in quality, which is visible from their replacement guarantee. If you find manufacturing defect in your product, it is replaced straightaway. They also have plans to improve their design in future models. "We plan to include options for storage of charge, and reducing the required effort, so that the consumer can get maximum charge with minimal cranking," according to Ashish Bhat, who handles the electronic design, as well as the research and development initiatives at ideaForge.

Initiatives For The Environment

If that's not all, they also are responsible in their conduct towards the environment. Talk of global warming and hazardous materials, and they say they're already getting their company on track.

ideaForge is *en route* to compliance with the required quality certifications. In addition to this, they also plan to comply and achieve certification in certain crucial environment-specific standards—the primary being RoHS compliance. Although ideaForge doesn't directly manufacture the chargers, they are still doing their bit by ensuring that the manufacturer that does the job also has the required certification. According to Rahul Singh, who looks after the manufacturing, production and other ancillary responsibilities, "We have outsourced this work to several manufacturers and we ensure that they are RoHS compliant, especially, the Chinese source of some raw materials. Other than that, the paper that is used for packaging are from wood-free sustainable forest resources. Even the ink used for printing on their products is "heavy metal-free".

If you too, would like to do more than just talk, and make a difference to our society like ideaForge, write in to us... ⊠

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Looking For Trouble

Nimish Chandiramani

If you've been following these pages closely (and we hope you have), you'll have noticed that we've talked a lot about security—it's a huge concern for any organisation, and it's something that requires constant attention. If you've been taking our advice then, you ought to have an effective security solution in place for your office. Or do you?

You see, implementing security solutions and policies is only the first step. Every once in a while, you need to verify that you're security solution is doing what it's supposed to. Perhaps more importantly, you also need to know whether everyone in your team is following the security policies you've so lovingly prepared.

Check-up Time

To ensure that everything's all right with your security arrangements, you need to conduct a security audit. There's no strict definition for the term, but like any other audit, the basic idea is to examine the truth of a claim—the claim, in this case, being that you're safe from security threats. You might think that "Security Audit" is just a glorified term for sitting with a checklist—to a certain extent, it is. However, the seemingly mundane task of checking items off your list will let you know where you're going wrong with security, and help you formulate a better solution.

In the corporate world, security audits are carried out by a crack team of experts, who usually come at a fee that can run close to a lakh for a single consultancy. While some aspects of an audit can only be performed by security experts, you can do a fairly effective—and very cheap—audit yourself, too.

Think you've secured your office well? Time to put your money where your mouth is

The Elements

So how does one go about a security audit, anyway? Simply put, it's like we mentioned—knowing how your security solution should work, and checking to see if that's how its working. It's very important, then, to put your security policy down on paper—which programs are allowed to run on PCs, which users get access to which resources on your network, and so on.



Then comes the risk assessment—figuring out how important a security issue is. Consider the scenario that a laptop is stolen. On a scale of 0 to 10, the probability of this scenario is, say, 3. Now, on a scale of 0 to 10 again, the damage this scenario could cause is, say, 8. The risk of a particular scenario is the product of the probability that it occurs and the damage it could cause if it did. The higher the risk, the more measures you'll need to take to bring it down. The numbers expressed here are random—you'll have to assess your own situation (how scatterbrained is the employee with the laptop, and so on) and arrive at your own values. There's no formula involved here, and it's far from an exact science. The idea of the risk assessment is more to help you prioritise tasks.

But we get ahead of ourselves here. First, we need to prepare for the audit.

Groundwork

This is where we prepare our checklists, starting with the company's assets—PCs, printers, laptops, cameras, e-mails, passwords and so on—pretty much anything that can be threatened by unnamed malicious forces. This list should be detailed—model numbers, serial numbers, and so on.

Once you're done cataloguing your assets, it's time to assess the threats you might face. Common threats are stolen passwords, falling prey to a phishing e-mail, stolen or misplaced laptops and PDAs, and so on. If you can think of a threat, put it on the list—no matter how silly it sounds (once you start calculating risks, the less likely threats will find themselves low on your priority list anyway).

You should also know your security history—when was the last time you faced a security issue? How much damage did it do? Have you taken appropriate measures to ensure it doesn't happen again? Keep tabs on security trends in the small business / SoHo sector as well—they'll give you an idea of currently prevalent threats, and will likely lengthen your threat list.

Finally, take your threat list and calculate the risk of each threat. Now, you can begin your audit. We'll only go through some of the more common threats here.

Auditing Access

When you're not controlling who has access to what data, you've got yourself a problem. A visitor could walk away with your list of clients, for example, and you'd be none the wiser. An ideal situation would be to set up a domain controller (*Digit* February 2007). Failing that, you should ensure that all shared folders are password protected, and are accessible only by specific users—this means turning on Advanced Folder Sharing under `Tools > Folder Options > View in Windows Explorer`, and editing the permissions on shared folders. Furthermore, use dollar-shares—append a "$" at the end of the share name.

Another thing you want to look out for is automatic logins—while convenient, it's more than unadvisable to allow a PC to automatically log in to a user's account. Should the wrong person be seated in front of that PC, it could possibly give him administrative access. In the same vein, network passwords shouldn't be saved on a PC—go to `Start > Run`. Type `control userpasswords2` and press `[Enter]`. In the Manage Passwords tab, make sure the list is empty. Ditto e-mail passwords—both in the e-mail client and on the Web. Finally, ensure that when a PC is left unattended, it's screen is locked (`[Windows] + [L]`).

Auditing Applications

The next threat comes from installed applications that shouldn't really be installed. Most often, these are instant messaging (IM)

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clients, and should be uninstalled. These programs run services that are prime targets for malicious code, which usually hijacks the service to wreak all sorts of havoc on your network. And, of course, there's the lack of productivity that IM clients encourage so much.

Bottom line: if you don't need it for work, it shouldn't be installed.

Auditing The Network

Here's where things get tricky. Network security isn't something you can learn very easily, so you might have to spend a lot of time reading up on the Internet, or solicit the help of an expert. But first, let's get the easy stuff done with...

If you use the Squid proxy server to control access to the Internet (and you should), you can start with blocking social networking sites, among others that could affect productivity. You can also block most popular banner advertisement servers and replace the ads with a message.

Now comes the tricky part—scanning the computers on your network for open ports. Network Ports let PCs—more specifically, services running on PCs—access the network and the Internet, and also act as ways into your PC. Usually, most ports on your PC are closed, and don't accept incoming connections. That doesn't really mean that open ports are an invitation to hackers—they just accept incoming requests for data. Running a port scan on a PC (using a tool called nmap, which has Windows-based GUIs too) gives you an idea of which services are using which ports. You can then go about disabling services that could potentially be exploited—like those pesky IM services. If you've been compromised before, a port scan is essential, but if you've had no security problems thus far, you could just install firewall software on each PC and be done with it.

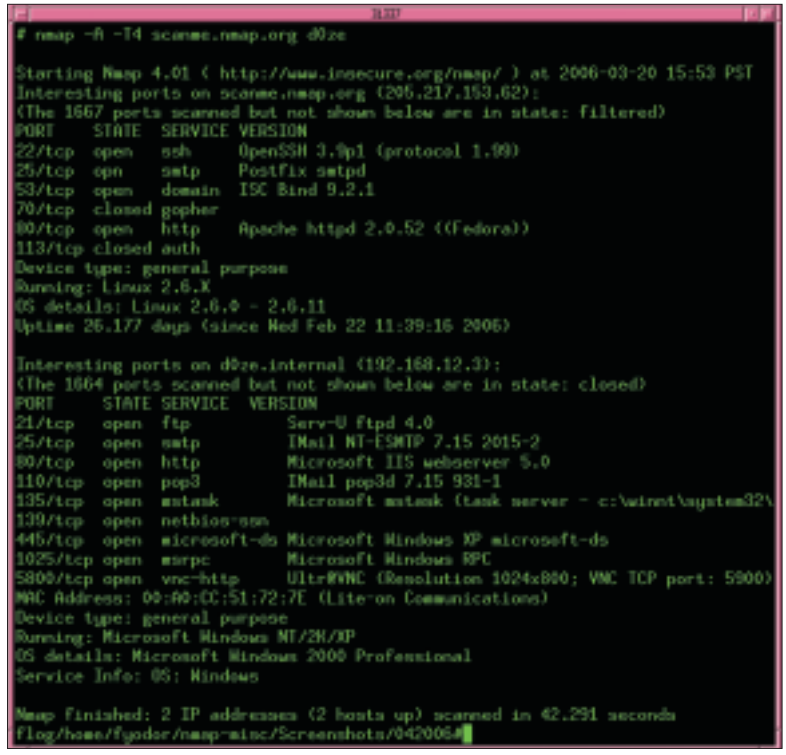
Other Audits

You also need to check up on your backup solution—the frequency of backups, and so on, and perhaps build some redundancy by storing some critical data on an online backup solution—just in case.

Your e-mail server needs to have proper anti-spam and anti-phishing measures built into it—just one successful phishing attack can become a slap in the face of all you've done so far.

Failing An Audit

If you're done with an audit and have passed with flying colours, chances are you didn't do it right. Around 99 per cent of companies who undergo a security audit fail, but it's a part of life. What you need to do now is start addressing



nmap is the tool of choice when it comes to scanning PCs on your network or open ports

issues immediately. Based on your audit, you'll be able to figure out the probability of a scenario more accurately, so you need to make your risk assessment calculations with new values. Once that's done, you've got yourself a prioritised list of the problems you should be attacking.

With the laptop problem we saw before, there's plenty of potential for damage if it were to get stolen or misplaced. To mitigate this risk, encrypt the laptop's hard disks. This way, even if the laptop does fall into the wrong hands, it's virtually useless in them, and more importantly, none of your data can be read.

The Aftermath

Once you're finished with a security audit, make sure you keep the results handy for your next audit. The results of the audit will give you enough food for thought, and will help you correct flaws in your security policy. Share an overview of the audit with your team, so they too can know what they can do to reduce your risks. If you found a lot of critical flaws in this audit, make sure you schedule a new audit as soon as you've addressed these flaws. If this is your first audit, schedule another one very soon, and ensure that you're auditing your security at least thrice a year.

Finally—and we've mentioned this many times in these pages—there is no substitute for an informed and educated team. Therefore, security shouldn't be just your concern—it should be everyone's. ⊠

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Lead Feature

Save The Bits, Save The World

How do Indians spend time online? Is any of it really constructive?

Agent 001

You see them everywhere. These horrid numbers and graphs that claim to say something, but always in gibberish or double-Dutch. From Google's Zeitgeist to your company's finance department, and your personal Web site's visitor data to numbers thrown at you in advertising-statistics, they say, never lie. Take, for example, the fact (so says The World Bank) that on average every woman in India gives birth to 2.9 children in their lifetime. What does 0.9 of a baby look like anyway? Is that code for short people, or a baby that's missing a toe? Anyway, jokes apart, we're talking about statistics here because we're looking at all of us Indian Internet users out there. What's the most popular browser? Which sites do we prefer to visit? What does India do online? If you have such questions, we're here to give you some answers, and a little bit of insight.

When it comes to the Internet, it's hard to ignore what Alexa.com has to say. Although the list changes often, depending on what's hot at the moment, we're taking a snapshot at the end of June to try and figure out what we're doing online as a country.

The Front Runners

The top three sites for Indians are Google.co.in, Yahoo.com and Google.com-weird because Google figures twice in the top three. Orkut India comes in a close fourth, and solidifies its position as India's most popular social networking site. YouTube is fifth, and here we begin to wonder. The average Net access speeds that Indians get certainly doesn't justify a bandwidth heavy site like YouTube being in the top five. Of course, thanks to the Mahatma and Munna Bhai, maybe we're just doing some Gandhi-giri with our miserly Internet service providers and being more patient while pages load. Although, whether we need to start our own version of Satyagraha to get more bandwidth without limits is another discussion altogether.

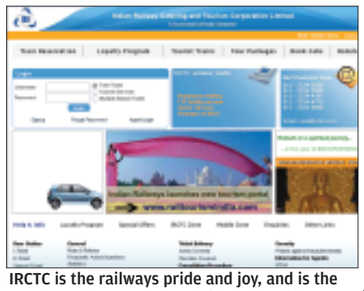
Moving on, we find Blogger at 7, which means we Indians are an expressive bunch. Rapidshare rears its ugly head at 8, making all of us here at *Digit* go "Ah! There it is!" Apparently, all our anti-piracy articles haven't really had too much of an effect on the masses. And no, we don't believe you're actually using RapidShare's services to upload and download "legal stuff". Wikipedia at 10 is something we expected to see when we have Google at 1 and 3, since most of the information seekers that Google-up stuff, usually end up at Wikipedia. Orkut.com at 12, just ahead of Facebook just concretizes the fact that we love Google products.

After Dark

After rank 15, we start getting into the darker alleyways of the Indian mind. So far we've been seeing what most of us Indians do when working-with the exception of some social networking and YouTube-ing. Once the sun sets, we Indians cease to be G Rated, and end up scratching that itch. Coming in at 17 is a site that's notorious for adult-oriented and quite illegal content-XBoard.us. Between the next such site, at 18 and 19, come IMDB and CricInfo, which reinforces the fact that we Indians love our movies and cricket. Then at 20, comes Debonairblog.com, which is another adult site that specializes in *MMS-scandals*—need we say more? Adult FriendFinder—are there any "real" Indian profiles on it?—finds itself at 24,



An example of a typical post on DebonairBlog, where innocent women are exploited while going about regular life, yet the site stays afloat!



IRCTC is the railways pride and joy, and is the most popular government site on the list

reinforcing the fact that we're probably using the Net to vent repressed frustrations.

After that, we have a lot of scattered "porn sites" (for lack of a better way of categorising them) in the top 100. You have PicsCrazy at 50 (popular for hosting adult still images that are linked to from forums like XBoard.us), Savita Bhabi at 59, Indian Sex Stories at 64, YourFileHost at 70, and Free Sexy Indian forum at 84.

Torrents Of Data

Mininova.org and Torrentz.com are the top Bit Torrent sites at 29 and 33, respectively. Though The Pirate Bay is also popular, it's a distant third at 51, with ISOHunt fourth at 60. What this means is that although the majority of bandwidth is used up *torrenting*, this is not so for us Indians. Again, this is an expected phenomenon because of the scarcity of broadband connections, and absolutely no *unlimited* broadband schemes worth talking about.

Save The Best For Last

IRCTC.co.in (used to book rail tickets online) is at 25, and this tells us that the Government hit the jackpot with that site at least. The Indian Railways site at 30 is the next government site in the list, so other government agencies should take a leaf out of the railways' book to start offering more important e-services. Understandably, Microsoft.com comes in at 14, because we all use their products—paid for or otherwise. Naukri.com at 15, Monster India at 23 and Times Jobs at 38, are interesting, because that tells us that most of us Indians seem to always be on the lookout for bigger and better opportunities—as we should be!

ICICI Bank is the most popular online, ranked at 32, followed by HDFC at 40. Download.com is our preferred software source at 36, and Reliance makes its presence felt with broadband services at 45 and Zapak at 39. BSNL comes in at 48, and rounds up all the noteworthy sites. You can of course check for changes in the pecking order at Alexa, to keep yourself abreast of the changes.

What Does It Mean?

Now that we're done with telling you what ranks where, let's try and make some sense out of the madness that is the Internet. For one thing, we've been following the list for some time now, and it's quite obvious that India is obsessed with adult content. Even if you're not addicted to it, you just can't seem to stop yourself from clicking on that suggestive, naughty-looking link and getting an eyeful. Although sites like YouPorn are on and off the top 100 list, voyeurism, it seems, is the order of the day. No one wants *firangi* porn any more, that's just boring... Indians would rather look for *scandals*, and play peeping tom with other Indians. Whether the poor state of sex education, our repressive laws, the so called moral-police, or even the media are responsible for causing this craving for titillation is beyond the scope of this article. The fact remains that it is true, because remember, statistics don't lie.

Based on data from various torrent watchers, the most popular file formats on the network are AVI and MP3. And it's not just the MPAA and RIAA that we're ripping off—because a lot of the content being downloaded is made by the adult film industry. More porn. Sigh!

When we compare this data to the rest of the world, we find that the first adult site comes in at rank 35, with the big guys (Google, Yahoo! and Microsoft) ruling the roost. There's also more in terms of constructive usage, though, and sites like Flickr, Craigslist, BBC, Adobe, DeviantArt, and more actually featuring in the list. Obviously porn and torrent sites feature too, but they don't seem to be too much of a priority for the rest of the world.

What Does It Mean?

With all that data being torrent-ed, and ISPs buckling under massive amounts of data transfer, who do you think suffers? If there's one big reason why you cannot spend all your free time on YouTube, it's the BitTorrent network! It's gotten so bad that ISPs, even in bandwidth heavens like the US and Japan, are starting to impose data transfer limits on their customers. So what makes you think that ISPs here are ever going to let us click-happy Indians get in on any of the 10 Mbps *unlimited* goodness?

As far as adult oriented content goes, what you do in your home is your business. But if you start clicking pictures of un-suspecting people, violating their privacy and sharing the pictures in order to become popular on a stupid forum... you've just digressed to a lower life form. Sadly, the Internet has become just another Window to peep through and satiate our various fetishes. Hopefully, this is all just a phase, and we will all outgrow this criminal behaviour. Until then, we're going to have to make do with bandwidth limitations, and protect our loved ones from voyeurs. We can all start with leading by example...☒

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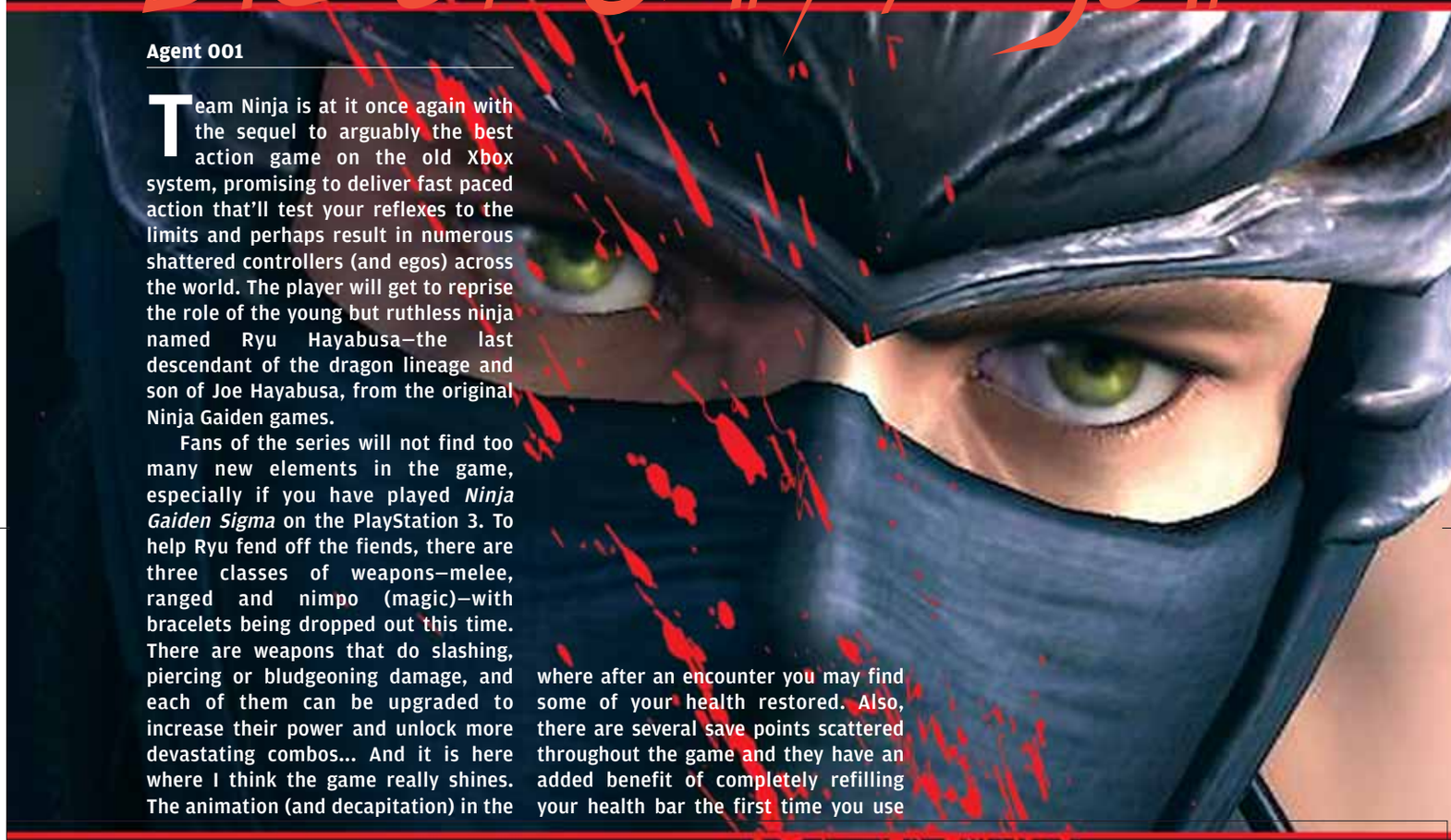


Ninja:Ninja.qxd 7/3/2008 7:09 PM Page 95

Rating: **7/10**
Developer: **Team Ninja/Tecmo**
Publisher: **Microsoft Game Studios**
Distributor: **Redington**

Ninja Gaiden II

Die and Try Again



Agent 001

Team Ninja is at it once again with the sequel to arguably the best action game on the old Xbox system, promising to deliver fast paced action that'll test your reflexes to the limits and perhaps result in numerous shattered controllers (and egos) across the world. The player will get to reprise the role of the young but ruthless ninja named Ryu Hayabusa—the last descendant of the dragon lineage and son of Joe Hayabusa, from the original Ninja Gaiden games.

Fans of the series will not find too many new elements in the game, especially if you have played *Ninja Gaiden Sigma* on the PlayStation 3. To help Ryu fend off the fiends, there are three classes of weapons—melee, ranged and nimpo (magic)—with bracelets being dropped out this time. There are weapons that do slashing, piercing or bludgeoning damage, and each of them can be upgraded to increase their power and unlock more devastating combos... And it is here where I think the game really shines. The animation (and decapitation) in the game are a joy to watch, and to the spectator, the game may look like an ordinary button-masher. However, the one behind the controller knows that what one sees on the screen is carefully thought out sequence of combos, counter attacks and ultimate techniques. As some of you may already know, this game can be pretty unforgiving when it comes to mistakes as hordes of enemies are rallied against you. To make matters worse, the camera control system has not seen any improvements and this can be very frustrating at times.

However, to make the game more accessible, the developers have tweaked some of the game elements. The most notable change is the healing system, where after an encounter you may find some of your health restored. Also, there are several save points scattered throughout the game and they have an added benefit of completely refilling your health bar the first time you use one. Ranged weapons, especially the bow have been reworked making it more useful in combat, and not just useful for solving puzzles.

For those of you who look for a deep story line in every game, will be sorely disappointed. The plot of the game and its characters are inconsequential and the only thing that matters is killing everything that moves till there are none left. The fun of the game lies in felling your opponents in the most stylish and gruesome way to rack up Karma points and aspire to see your name high up on the XBL leader boards. This does not mean the game is shallow and unfulfilling—it's just that combat mechanics more than make up for the lack of depth and sense in the game plot. Additionally, there are a few un-lockable things, like costumes, difficulty levels and challenges, enough to keep you engaged for days and even months.

After all is said and done, we would say this is one of those games that you'd either absolutely love and never set it down till you've mastered every bit of it or you'll throw the game away in one of those boxes labeled 'oh, why did I ever buy this', never to set eyes on it again. The game may seem very daunting at first; however after you've got the hang of it, you'll rarely find a game with more fulfilling combat system. What you may need though, is the persistence and resilience of a true Ninja to pull this one off.

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Conan:Conan.qxd 7/3/2008 7:27 PM Page 98

Age of Conan: Hyborian Adventures

Heads Will ROLL!

What do I know of cultured ways,
The gilt, the craft and the lie?
I, who was born in a naked land
And bred in the open sky.
The subtle tongue, the sophist guile,
They fail when the broadswords sing;
Rush in and die, dogs
I was a man before I was a king
The Phoenix on the Sword

Score: 8/10
Developer: Funcom
Publisher: Eidos Interactive
Distributor: NA

Agent 001

Most of us were introduced to *Conan the Barbarian* through the ridiculously cool Arnold Schwarzenegger flick, released in 1982. The movie is famous more for its over-the-top dialogues than its action (which is amazing in its own right), and lets not forget its soundtrack—one of the finest to come out of cinema.

But Conan is older than the movie, older than most of us. The character was created by Robert E. Howard back in the 1930s as an amalgamation of "the dominant characteristics of various prize-fighters, gunmen, bootleggers, oil field bullies, gamblers, and honest workmen I had come in contact with". Here we are then, almost 80 years later with an MMORPG set in the lands and characters created by Robert E. Howard.

Age of Conan (*AoC*) is a barbaric game, much like the world and the character that it draws from. It is ruthless in its system requirements, unforgiving with its bugs, alluring with its splendid vistas, sprawling cities and naked women (yes, the game has nudity), and is thoroughly captivating. Fittingly perhaps, it is the game's combat engine which will grab you by the throat and keep you enthralled. *AoC*'s combat elevates the morbid boredom inherent in MMORPG-combat to a level of sheer fun and visceral delight. Heads will roll and you will love the game for it.

The combat engine is the best part about the game. The first innovation it introduces is the concept of combos—much like in a game such as *God of War*—where you are asked to hit keys in a certain order to execute amazing moves and feats. This immediately connects you to the character and acts as a glue which marries your skills as the person behind the keyboard to the performance of your on-screen persona. Combat now isn't just about knowing the numbers that go behind an MMORPG and playing to your character's strength; it is also directly affected by how well you execute to your potential. This added layer upon the traditional MMORPG combat system goes a long way to making the experience so much more satisfying and immediate.

Much like combo systems in other games, you are rewarded for successfully completing combos, or for chaining combos, or for picking the right combo for the situation. Successful combos do more damage than regular combat, goading you to make more use of the feature. Spamming of the combos is avoided by use of a stamina system—the more devastating the combo, the more stamina it takes, pacing yourself is thus essential as well. The ultimate reward though is the fatality system that successful combos have a chance to trigger. While the combat keeps you glued behind the monitor, punching keys away, the fatalities will get your blood pumping and will often have you shouting manically at the butchering you have just wrought. Much like *Mortal Kombat*, fatalities in *AoC* are over-the-top: thrust your broadsword into the opponents eyes, chop off his limbs and then his head, cut him into two, bash his skull in using your club, cut his throat and hear him gurgle in pain, and so on. It's brutal stuff, accompanied by painful screams, chopping sounds and satisfying animations. *AoC* is rated Mature, not just for its violence but also for the nudity and language that it often parades bravely and perhaps for some, unnecessarily.

The beauty of the game though is that nothing seems out of place, not even the violence. The world created almost seems to demand the blood and the guts. The art direction is brilliant and consistent, with splendid architecture and grand level design, as is the detailed character creation tool. Very rarely will you come across another player that looks like you, or even similar to you—the options here are as deep as those used in single player RPGs such as *Morrowind*. Adding to the visual appeal and world immersion is the use of mounts: you can choose from a war rhino, a mammoth and various types of horses when you hit level 40 (the level cap is at 80). And yes, the game has mounted combat. Some mounts will allow you to swing your sword as you gallop through your enemies, while others will acts as weapons themselves. There is nothing as satisfying as swaying through throngs of people in a teeming city, mounted on your very own mammoth. The game also adds player-versus-player combat, with the added layer of guild-versus-guild combat. Guild-versus-guild leverages upon the guild-cities that you can build along with your friends, which allow you to take part in unique quests, unlock guild achievements and manufacture siege weapons to bring down rival guilds! The depth and quality of combat in *AoC* will constantly delight you.

Locales vary from sprawling capital cities to corpse-ridden battlefields, to pyramids sitting on desert sands, to swamps. Set against such a backdrop, it comes as little surprise when your character lops off a head, or cuts someone up in two—it all fits. *AoC* is a great package tied up together nicely with a musical score that does the aforementioned movie proud... the game is almost perfect.

Where it succeeds, it succeeds magnificently, but the game also falters, and when it fails, it does so with equal grandeur, no half-measures here. The game is quite buggy, and has obviously been released a few months before it should have been. Forgive its high system requirements (you will need an 8800GT-class card if you want to play it with all bells and whistles, even so, it can run at a low frame-rate inside some packed cities), but you can hardly forgive its frequent crashes, or its gameplay bugs—which include the most fundamental oversights such as strength and dexterity not having any effect on combat! To be fair to the game though, most of the problems mentioned have happened to "other people", our experience with this title has been headache-free, barring the occasional crash. Also to note is that the developers, Funcom, are on top of the problems for the most part. They might not be very active on the community forums, but they are keeping a healthy and needed, two-patch per week schedule. These patches not only fix issues but also add new content such as new quests, and new armour sets.

Ultimately, as with all MMORPG titles, it comes down to this: is it worth spending the monthly cash? Our suggestion would be to pick up the title and play the game for the first free month—if you have bad experience with its bugs, drop out, otherwise continue to play, what is an amazing title to hit the MMO scene.

If you do decide to get in, ping this author and we can perhaps quest together: character name of *Harami*, a Barbarian on the non-PvP UK server Crom. See you in Hyboria!

agent001@thinkdigit.com

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Score: **9/10**
Developer: **Rockstar North**
Publisher: **Take 2/Rockstar**
Distributor: **e-Xpress**

Grand Theft Awesome

Agent 001

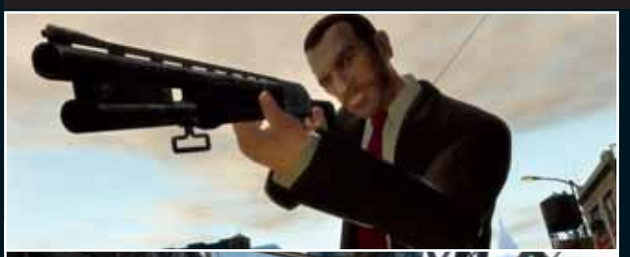
Check this—I get out of my room, grab my HellFury bike and head out for a spin. Thought I'd like to really test the power of this machine so I head out to the airport runways for a test drive. Just then the men in blue make an appearance to spoil the fun. My outing pisses them off so much that they come down on me guns blazing, with their armored vehicles, motorboats and even a helicopter. I give them quite the run for a while. However, I get overwhelmed by the firepower of this city's finest and the only way out looks like the blue skies. So I ditch my bike, grab the nearest helicopter and take off. But the persistence of the lawmen force me to ditch the chopper on the subway tracks, jump the fence, carjack an SUV and make a final attempt at freedom. Alas, this spirit is strong but the body finally gives way to the constant fire and I fall dead—to wake up at the nearest hospital in perfect health and only a few bucks short in my pocket!

If this is your idea of fun, then head to your nearest peddler of good times, grab a copy of *GTA IV* and join me in Liberty City. The mother of all action-based sandbox style game, *Grand Theft Auto* is back again with a story to tell of a yet another guy and his 'ascent' into the criminal under belly of the city. This time around, the protagonist is an eastern-European war veteran who's been lured to the city of dreams by his cousin, only to inevitably find out that it's not going to as easy as it seemed.

Rockstar North has once again stuck to what they do best and as they've done with this series in the past, they've simply added a few layers complexities over what essentially remains a typical GTA game. You start off a shady apartment in less-than-affluent neighbourhood as you realise that your cousin Roman hasn't exactly been accurate with his story. All is not lost though, as the world of near limitless possibilities lies outside your broken window. As you soon find out, there are a myriad ways of fattening your wallet in Liberty City—from carjacking and drug dealing to carrying out a hit on a rival gang member. If you are looking for something less violent (sigh!) you can earn cash by driving the denizens of the city to their destination. Liberty City also offers its fair share of distractions—just call-up one of your buddies and head to the nearest bar, strip club or watch a Russian cabaret show or take your girlfriend out on a date to a neighborhood diner for a warm and cosy meal. Who knows, if you play your cards right, she might even invite you in for the proverbial 'coffee'.

The beloved radio stations retain their charm and humor and play critic to the decadence of modern society with issues like global warming, 'war on terror', propaganda through media and the old chest nut called obesity. Significant changes have been made to the combat system with an improved aiming system and the ability to duck and take cover. What hasn't changed, however, is the save system, much to the dismay of gamers like me. If you fail the mission for one reason of the other, the game forces you to start all over gain, which can be pretty annoying in the long missions. In an apparent attempt to make the game play more solid, the developers have reduced some of the options available in the previous GTA titles, like rigging a car with a bomb, prior to undertaking a mission. All in all though, the game feels much tighter and more fulfilling than the previous iterations. To those of who are uninitiated to the world of *GTA*, this game comes highly recommended. I mean where else will you find a bunch of police car chasing after another police car?

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The Stars Hold All The Answers

Mute Testament To Mankinds Foray Into The Unknown...



Michael Browne

Designing games for a console and porting them to a PC hasn't been much of a success. *Mass Effect* was birthed as an X360-only title developed by hallowed RPG demigods BioWare. The merits as well as shortcomings of the console version are the prime binaries behind this port, and I feel the PC version is better!

The success behind *Mass Effect* across platforms, lies in the epic proportions of its plot, and the way the story unwinds as you play. From your rise from a mere grunt in the armies of the Human Alliance Military to *Commander Shepard* (you can't change your surname in the character customisation!), and the acquisition of *Spectre* status, to the commanding of your very own state-of-the-art vessel the *Normandy*, the promise of a juicy plot rife with surprises and ripe with opportunity is just too good to pass up.

Here's a plot summary—Several hundred years in the future, mankind has discovered alien technology on Mars that open up possibilities of interstellar travel. We humans are the youngest members of the Galactic Council, a UN-like organisation populated by dozens of other more advanced alien species. Perceived as ambitious upstarts, humanities first great achievement as a member of the council is your admission into the spectres, a highly elite group of individuals who operate independently, and often outside the bounds of the law, to protect the council's interests. When a spectre named Sarin goes rogue,

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destroying a peaceful colony of humans on Eden Prime, you're tasked with bringing him to justice. What starts as a routine capture mission soon becomes a lot more as you and Sarin indulge in a game of hide and seek spanning the Milky Way. As the pursuit heats up you will gradually discover he's got something more than hatred for your species up his sleeve. Your elusive quarry will lead you to alien worlds which you will explore often getting side missions from everything you do. Will you be a ruthless renegade, or a benevolent paragon? Your attitude with innocents you come across throughout the game will not only affect your character but also affect your team mates' attitudes towards you. *Mass Effect* offers a plethora of exploration opportunities and perennial background quests like discovering mineral resources, or unearthing artefacts will have you scouring planets on foot or via Mako, your own six-wheel, all-terrain buggy. The a third person shooter. The PC version also seems a little easier to play than the X360 version, but this could well be due to my preference of the PC controls and the ease of access of many of the in-game options.

Your weapons range from space-age assault rifles, shotguns, sniper rifles and sidearms to biotic and tech powers. These powers are even more impressive, letting you toss enemies into the air, hurl them at walls and let the law of



The man...the machine. You posing beside your ride - Mako



Stop bugging me you lousy mosquito!



Ah! Got the irritating sucker...



The Stats screen, typically BioWare replete with customisation options



The Milky Way, your playground for the next 30 hours or so...



Geth in my way? Polonium rounds will turn you into green goo boy...

other characters you encounter. Throughout the game Sarin's allies will challenge you to high-tech firefights. Your aim besides his capture now being to aid hapless innocents left in his wake, and to discover why is Sarin intent on bringing back the *Reapers*—a mechanical race that wiped out the *Protheans*, (a powerful, technologically advanced civilisation), some 50,000 years ago, only to vanish into the mists of time.

Being a BioWare game, there's a strong character development system in place, and varied classes to choose from. You will also be joined on your travails across space with a team, consisting of a bunch of followers. Each of these characters have quirks and attitudes as different as night from day. The good VS evil judgement call is omnipresent, and underlies

Rating: **9.5/10**
Developer: **BioWare and Demiurge**
Developer: **EA Games**

nature of the story and quests are such that you'll find yourself thoroughly engaged throughout your gaming session.

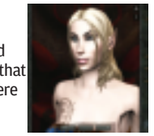
Improved from the X360 version are better character controls, a quick slot toolbar that you can add and drag special abilities (yep...you get those!) to, and a new tactical combat interface from where you can give quick orders to your team. The controls work beautifully. In fact, so beautifully that you will sometimes forget that this is an RPG, where your character stats matter more than the accuracy of your targeting reticule, and actually play like momentum do its job. The intricate weapon and armour upgrade system lets you slot upgrades into virtually every weapon, including grenades.

The graphics aren't superb, but they're not bad at all. The big plus being this game won't kill your system, and a fair amount of eye-candy is available to even modest setups. One minus point is that any `[Alt] + [Tab]`-like action crashes the game—look for patches.

You know you've come across something exceptional when this is one of the only complaints you can come up with. Another is the repetitiveness of the exploration system. And that's it. *Mass Effect* is absolutely superb. An adventure ride nobody ought to miss.

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Size Does Matter
Some *Age of Conan* players were in for a rude shock of sorts when their female character's bust sizes decreased from buxom to run of the mill. Due to the public outcry that followed, the games developers announced that they were working on a fix to restore the sizes to the previous dimensions



Power of Touch
The popularity of the iPhone has provided impetus to an entirely new breed of pornography—one that is optimised for iPhones. The Web sites that host smut are made looking at the touch screen capability of the device. And with the 3G iPhone hitting the shelves, the scene seems to get more steamier.



Escape

NAME GAME

Mail Without G

In the world of business, names are everything, especially trademarks. Companies go through a lot of trouble to safeguard their identity from unscrupulous operators who want to piggyback on the hard earned reputation. However in this case the tables were turned, with a small time guy taking successfully on the giant search giant Google.

If you are a German, or was passing through Germany these days you would not be able to access Gmail by typing **www.gmail.com**. Instead of having to type in their user name and password, users were greeted by a message that apologised for not letting users to log in and check their mail the usual way. No hackers had broken into the homepage, in case fearful and cautious users were pressing alarm bells. The apparent disfigurement was done by Google, that recommended users to use **www.mail.google.com**. Here also, Google had no right to link to the Gmail page and the hapless users were forced to copy-paste the URL into the address bar to access their mails.



Illustrations Harsho Mohan Chattoraj

Google had a long standing feud with a local venture capitalist named Daniel Giersch, who owns the trademark to a paid e-mail service called GMail. This was registered years before Google dreamed up the name for its e-mail service, so nobody could accuse him of being a copycat. Google had already lost the case that Giersch had brought against it and was fined for illegally using a trademark.

Google has no plans on what steps it will take in the future to resolve this unsightly mess. However, it has said that there will not be any degradation in service and all features would be supported in the German version of Gmail.

That should give the Germans some consolation, after they have gotten used to the new URL.

Whatever Happened To...

Second Life

A virtual world might be a dream come true for many people.

Second Life is still very active today. The claims of its popularity are still highly doubtful. There was a sudden influx of companies starting up their online stores on *Second Life*, but there are some that have started turning their backs to them. Pontiac and Wells Fargo are just some of these companies. AOL too left, but it hasn't given up on the idea of marketing and economics in a virtual world. It decided to join a *Second Life* competitor—**www.there.com**. There were even incidences of properties being bought and sold. Virtual real estate prices came crashing down.

A parallel universe is the MMORPG market, where the younger audience prefers to play with others. Besides, many have found *Second Life* to be a very harrowing experience. In India, anyway, staying online continuously on a fast connection is quite difficult.

Another major concern is the kind of prohibited content that is posted, and the happenings in the virtual world. To tackle this problem, users under the age of 18 prohibited from joining. Today, most of *Second Life*'s income comes from the larger companies, rather than the low paid user group.

We wonder if *Second Life* will shut shop soon.

Win!

My Desktop

No Winner!
Better luck next time!



Send us your desktop with a description of how you made it to **mydesktop@thinkdigit.com** with the subject **"My Desktop",** and tell us your postal address, too.

Participate in this contest and win next month

.net Interview Questions
by Nagaraju B
Published by



WILEY-INDIA

DigiPick of the month

The age of the Terabyte!



Last month's winner:
Jerin Pallipeedikayil
Kerala



Participate and win next month:
The Essential Guide to User Interface Design
by Wilbert O. Galitz
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WILEY-INDIA

WIN!

Send in your entry and you could win an exciting gift by sharing an amusing picture with a tech angle to it. The picture should have been shot by you, and should not have been published anywhere earlier.
E-mail your picture with **"DigiPick"** in the subject line, mentioning your postal address, **on or before the 20th of this month** to **digipick@thinkdigit.com.** One prize-winning picture will be published each month.

STEAL ALL

I Kid You Not

With all the heat and dust over illegal filesharing issue people would expect musicians to zealously guard their share of royalties and milk each and every compact disc for all its worth. There have been notable exceptions, with bands like Nine Inch Nails and artists like Radiohead giving away music for free. However Kid Rock has gone into entirely different territory by recommending fans that they steal his music!

In a "public service announcement" that was posted to YouTube (you can watch it here: http://tinyurl.com/59ofda in case you are interested) by Kid Rock he announced that since he was so stinking rich it didn't matter if people illegally downloaded his songs. He probably gladdened the hearts of anarchists and anti establishment types when he said that big corporations were evil. His advice to viewers was to steal anything that caught their fancy. From laptops to iPods to cars to oil, everything was fair game. His contention is that since big corporations were sitting on billions of dollars of cash they would not miss the one or two missing items on their inventory. Bill Gates and Steve Jobs were particularly picked on as people to target, on account of their vast "fortunes".

Kid Rock, unlike many artists doesn't sell his music on iTunes as he feels the system is biased against the artists. The rap rocker also says that the Internet is a way to settle scores with record companies who have been ripping off both performers and customers with ridiculous prices.

While most people would dismiss the video as harmless comedy there is a danger that some idiots might really believe what their idol said and attempt a spree of shopliftings and car-jackings across the world. We hope that Kid Rock has a plan in hand when these luckless sods are chucked into the penitentiary.

ENGLISH LESSONS

Fun With Nintendo

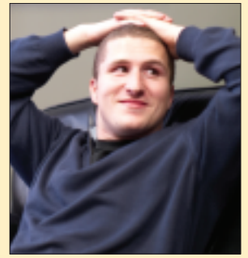
Now your parents won't crib any more when they see you glued to the addictive hand-held gaming console: Nitendo DS or popularly abbreviated as NDS or simply DS. As the doctor always ordered, fun and games should always be a proper decoction and it's not long

People Who Changed Computing

Shawn Fanning

File sharing and P2P may be pretty common now, but back in the day when Napster was launched, the idea was pretty revolutionary.

Born in 1980, Fanning was a computer freshman student at Northeastern



Shawn Fanning

University, when he conceived the idea of Napster. By his own admission Napster's inspiration came from his dorm mate who had trouble finding MP3s of his favourite songs on different Web sites. The program consisted of two parts: server and client, with the server containing indexed list of files available for sharing by users. Napster went prime time in 1999.

The file sharing service was free and news spread by word of mouth to become a huge hit. In a short time Napster grew to a user-base of millions of people, with hundreds of thousands simultaneously using the service.

Later, Fanning founded a company that focussed on the distribution of legal music called Snocap. However the company was not a success and was bought by imeem.

■ Man auctions his soul on Ebay, another auctions life: disappointed by low prices ■ Google hires corporate concierge to pamper staff

■ Texas law requires private investigator license to repair computers ■ 14 year boy breaks into house and orders $100 of pay per view porn

Bluff
YOUR WAY THROUGH

Linux

Mount point: In Unix-like operating systems, directories and devices are organised in the form of a directory tree. Each file is logically attached to the preceding file by a mount point, while the entire OS is mounted on /.

Grub: Acronym for GRand Unified Bootloader. Grub lets users choose OSes, in case of a multi-booted computer.

CLI: Command Line Interface is the original method of interacting with the OS, before point-click and drag-drop became ubiquitous. Users typed in various English-like words to perform actions like copying, creating and deleting directories and running programs.

Root: As root, you have ultimate administrative privileges in Linux. The root user can install software, delete system files, and if necessary, crash the OS with a few well chosen clicks or commands.

Shell scripts: Shell scripts are small snippets of code that can be typed in CLI, to perform simple and complicated system related tasks like searching and sorting, finding out patterns in data and so on. The scripts are written in a distinctive programming language.

Swap space: The swap space in Linux is used in a way similar to virtual memory on Windows.

Usage: I had insufficient **swap space**, so I logged in as **root** and used the **CLI** to type out a **shell script** and increased it. I also changed the default OS in **Grub** and changed the **mount point** of my external hard drive.

Wild Wild Web

Pointless Web

Zillions of new Web pages crop up and crowd the filled-to-the-brim beaker of the World Wide Web.

In case you were curious to skim the dregs of the Internet barrel, you'll find the most obnoxious sites at **www.pointlesssites.com.** Just skim through the numerous pointless sites that are frequently featured here.

It lists only pointless and useless sites that don't have pop-up ads or too many ads in general. They are original, useless, are not offensive and most of all make you smile—family friendly fun! Well, we hope that you smile. The homepage rakes up the newest pointless sites that pop up and allow you to be updated with all the latest crap happening around in the World Wide Web.

You are likely to waste more time here that ever... don't sue us for that though.

No More Monday Blues

You think you have a heavy workload? Try working 16 hour days, 7 days a week, in a poorly ventilated ambience? Hours of daily commute? Difficult co-workers? Poor pay? Well hold on, there must be an end to this. Alas, Your job isn't as bad as you think. Not completely crap; not yet! You always hear about people with jobs worse than yours, but where are these people? At **www.worst-jobs.com**, that's where!

This site is meant to make you sigh with relief, after you find out that no matter how awful your boss is, at least he doesn't chop off your head when you do something wrong. Nor does he ask you to wade through the sewers, handle entrails and excreta, or stick your arm into the warm, cavernous bowels of large farm animals.

If your job is crappier, more dangerous or more poorly paid than the ones listed in there, let them know and you could win the Worst Jobs Trophy—which is given away at regular intervals.

before the Joshi Gakuen all-girls junior high school in Tokyo realised this.

Imagine this: a giggly gaggle of 32 seventh-graders merrily glued to their DS with the teacher applauding! The students are now on a fun-learning course with the novel idea of using the popularity of the handheld console to learn basic English lessons. The enthusiastic students gleefully engage themselves in spelling words like "hamburger" and "cola" on the touch panel screen of DS following an electronic voice from the machine. Judging from the popularity it seems the DS will make has made a breakthrough entry into classrooms.

Japanese education has long been infamous for failing to develop English conversation skills and instead focus on rote memorization and grammar. However, Yasuhiro Yamamoto, manager at software maker Paon Corp. believed that it is time to bring in some element of fun in to learning and came out with the DS English program.

With it, learning grammar and spelling had never been so much fun. When the students got the spelling right, the word "good" popped up on the screen, and the student went on to the next exercise. The first five students to complete the drills were awarded colourful stickers.

While the students have given an enthusiastic thumbs up to the new experiment Principal Tsuneo Saneyoshi revealed that the initiative is still in its trial stages and have received mixed response from the teachers. The school is getting 40 DS machines and free software for agreeing to be part of a test in a real classroom.

WIKI TRAP

Research In Ignorance

What does the Internet generation do when they need to find something out? Like something for a research project or an examination. Going to the libraries and reading through zillions of pages of voluminous text in black and white—naah that's for the ancients. For students and other folks in search of knowledge it's so very simple to find out what they want: Wikipedia. However they would be advised not to jump their guns immediately, because there is some disconcerting news. Wikipedia might make you fail the exams.

Boasting over two million articles, Wikipedia is used by about 6 per cent of internet users, significantly more than the traffic to more authorised sites. However, it isn't the most reliable one owing to the fact that it allows entries to be logged or updated by anyone and is not verified by researchers, as the main source of information.

The Scottish Parent Teacher Council (SPTC) has rather surprisingly blamed such Web sites for the falling passing rates in the state. (We believe those students need to get back to the 'Paathshala way'). Students rely on Web sites and other Internet resources that may contain inaccurate or deliberately misleading information and there is no second thought (was there ever a first thought in place?) before implementing copy-paste and proposing it as their own work.

Eleanor Coner, the SPTC's information officer, acknowledges that Internet plagiarism is a problem. Pupils seem to believe that they won't be caught. However the Scottish Qualifications Authority has robust ways of checking for plagiarism and parents are worried their children will fail their exams.

Amassing information online is no-brain task now, but what is more important is to develop the skill of challenging what was presented as 'fact'. It is a skill that has to be learnt, and which many internet users won't have. Next time you thing of using Google or Wikipedia or for that matter any online resource, think of the authenticity before relying. Or better go back to libraries and surf the pages!

All Swell, That End Swell

A month of sickness again: Vijay's swollen belly was replaced with swollen feet; Rossi got swollen fingers from the *Fast Track*; Michael has a permanent swollen head; Nash had swollen eyes from issue closing; and our mailboxes were swollen with contest entries—too many thousands to count...

Uncle Chandiramani's university application finally came through, and he's off to *Amreeca* for further studies. At least there will be more food for us now, but one less person to frag in *Quake 3*. He promises to come back after his degree—providing he can come back as Raaabo's boss!

DIGIT DIARY

JOGGER POWER

Power Dancing

Imagine this—You are in the middle of a very important call, and your mobile battery is about to run out juice. Worse still, there is no charging socket around. Well, no need to pull your hair out anymore, just tap your toes and talk through. Thanks to a new gizmo, you now just need to face the music and dance. Quite a perfect way to charge up your device.

Mobile phone operator Orange said on Tuesday it had teamed up with GotWind, a firm specialising in renewable energy, to produce a recharger powered by movements alone. This is a good excuse for toe-tappers to dance their way through the streets to build up juice for their cellphones.

The device is very portable and can be just worn like an armband. It employs a weight and magnet to harness kinetic energy and covert it into an electric current to top up charge in a storage battery.

The product is fun, engaging and interactive that would encourage users to have a laugh while charging their mobile phone and at the same time test out a new energy-efficient prototype in these ecologically conscious times believes Hattie Magee, Head of Partnerships at Orange UK.

Now don't be surprised to have free dance shows on our streets, restaurants and almost anywhere!

In the meantime, researchers have now focussed their attention on the female breast motion. When a woman jogs, the three dimensional movement of her "assets" is thought to generate sufficient energy to power an iPod or a mobile phone. Though there are some issues like size and the quality of fabric covering the chest, the intrepid scientists believe that a solution will soon be available. We wait, with bated breath for this innovation that will lead the world nearer to eco friendliness. ⊠

think digit Blog WATCH

Featured here you will find snippets from some of the best bloggers who have registered at the Blog Watch section on thinkdigit.com.

If you wish to be featured here, head to www.thinkdigit.com/blogger.php and sign-up.

akshayy
http://tinyurl.com/6m793j
http://www.akshayy.com/sonyericsson/others/video-encoding/

Video encoding

This is not really a flashing subject, though many people would like to know how to do it. So convert your SE phone to a media center where you can watch movies!! Or at least watch video clips.

The application I suggest using has the slogan "does for FREE what other encoders CAN'T do for money". It's worth a try.

It is SUPER Simplified Universal Player Encoder & Renderer, the best you can find. A very nice application, with very frequent updates. That is the main reason why I'm not uploading it to the download site....go to this site: http://www.erightsoft.net/SUPER.html.Then Scroll down to the bottom where you can see this link "Start Downloading SUPER ©".....

Sony Ericsson phones support 3GP and MP4 formats, camera records in 3GP. So choose 3gp (Sony Ericsson) as Output Container at the top. According to my tests, Video Codec should be MPEG-4, and Audio Codec should be AAC. These are compatible with SE video player.

Binoy Xavier Joy
http://tinyurl.com/5o9ppa
http://tec-talkz.blogspot.com/2008/07/google-adsense-referrals-retiring.html

Google withdraws Adsense Referrals

Earlier today, Google launched an affiliate ad network. Or, rather, it rebranded Performics, the affiliate ad network that came along with its purchase of DoubleClick, as the "Google Affiliate Network." As with other affiliate networks such as Amazon's, participating Website publishers get paid a fee for each referral that results in a sale. Existing advertisers include Bank of America, Barnes & Noble, Citi, Target, and Verizon.

Google is also insisting you to update your Adsense account to Google account as a compulsory step...

■ Chinese soldiers morals corrupted by karoake, according to officials ■ IE bug can lead to strange search results spewing porn

■ Solar Technology used to roast chickens in Thailand ■ Windows Vista Bonus introduced by Dell, the bonus being Windows XP

Check your TQ

Testing Times...

1. Who is Gene Dolgoff?
a) Started the Human genome project
b) Michael Dell's partner
c) Inventor of the LCD projector
d) Was on the board of Microsoft

2. What is BREW?
a) A brand of coffee
b) A technology used in the air interface of mobile phones
c) The name of a software
d) The next Windows version

3. What's so special about Andy Bechtolsheim?
a) Developed Linux as known today
b) Fastest typist in the world
c) He provided the initial investment to fund Google
d) Nothing special about him

4. What is Jerry and David's guide to the World Wide Web?
a) Present day Yahoo!
b) A digitised version of the famous Tom and Jerry animation series
c) A new book on the Internet
d) An online tutorial of the Web

5. What did William Higinbotham invent?
a) We just made up this one
b) First official video game—Tennis
c) The first hacking utililty
d) A company that develops antiviruses

6. Who is Jon Stephenson von Tetzchner?
a) The real name of Jon Bon Jovi
b) The head of Opera Software
c) Head of Microsoft's intelligence department
d) Head of Google Norway

7. What is Avahan?
a) Indian initiative of the Bill and Melinda Gates foundation for HIV/AIDS prevention
b) Vernacular Indian software
c) Indian Font
d) An early warning system

8. How is Blue Origin linked to Amazon?
a) A brand of liqour sold on Amazon
b) Both are companies founded by the same person
c) The old name of Amazon
d) Both are rivals

9. Which common product is used in Audi, Chevrolet, Ferrari, Honda, Hummer, Maserati, Maybach, Mercedes, Nissan and Porsche cars?
a) They all officially use Bose for their audio solutions
b) They use the same tyres
c) They use Intel processors
d) They all use software developed by Infosys

10. Who or what is Gunpei Yokoi?
a) He made a weapon
b) Inventor of the Nintendo Gameboy
c) Luxury television brand in Japan
d) A popular technical university in Japan

Got an interesting question? Send it in with the answer to TQ@thinkdigit.com Mark "TQ" in the subject area.

Did You Know?

Ray Tomlinson is credited with sending the first official e-mail message. He started testing his initial system with the words "QUERTYIOP" and "ASDFGHJK", after which he set out to demonstrate exchange of messages over computer networks in the year 1971.

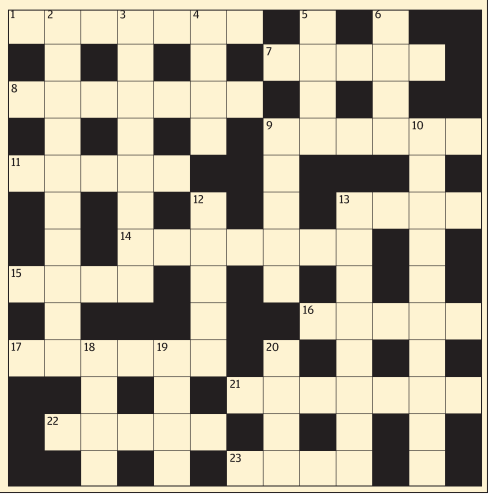
Answers

1. c	6. b
2. b	7. a
3. c	8. b
4. a	9. a
5. b	10. b

Crossword

ACROSS
1. Small computer programs that are automatically copied on to a computer when you look at a document (7)
7. Computer interfaces to which you connect devices (5)
8. Put in a systematic order (7)
9. -------ID-device for identifying incoming numbers (6)
11. Displays the contents of a file or starts an application (5)
13. The command language for Honeywell's CP-6 operating system (4)
14. Basic text editor supplied with Microsoft Windows (7)
15. Moving an icon or other image on a display screen in a GUI (4)
16. Open source NIDS created by Martin Roesch (5)
17. An enlarged photographic print (4,2)
21. Constraint logic programming embedded in an object-oriented language (7)
22. Sound within the acoustic range available to humans (5)
23. ----scale- scale of achromatic colours used in television and photography (4)

DOWN
2. Any device connected to, or part of, a computer (10)
3. Computer Assisted-------- or the use of (personal) computers for education and training (8)
4. Descriptive formatting codes used in documents that instruct a web browser how to display text and graphics (4)
5. Service Oriented Business Applications(abbr) (4)
6. Language in which a web page is written (4)
9. Small pieces of silicon material on which an integrated circuit is embedded (5)
10. Systems or circuits using valves, transistors, or silicon chips (10)
12. Magnetic-------material on which information may be stored by an electromagnetic process (5)
13. The unique name of a person, device or both that is recognized by a system (8)
18. Octal Program Updating System(abbr) (4)
19. Trademark for a powerful operating system (4)
20. Taiwanese company-third largest computer manufacturer in the world (4)



Crossword by **Nitta Jaggi**

Last month's Winner
No Winner!
Better luck next time!

Win!

Send in your entries to **TQ@thinkdigit.com** on or by the **20th of this month.** One lucky participant will win

linux administrator STREET SMARTS

By Roderick W. Smith
Published by WILEY-INDIA



May's Solution





Inbox

Write to the Editor

E-mail: **editor@thinkdigit.com**

Snail Mail: **The Editor, Digit, KPT House, Plot 41/13, Sector 30, Vashi, Navi Mumbai 400 703**

Digit will publish the best letters on these pages. Letters may be edited for clarity. **Please include your complete address in all communication.**

For subscription queries send an e-mail to **help@thinkdigit.com**



June 2008

Destination Dubai

First of all I would like to thank you for making such an excellent magazine. I am a 13-year-old reader of your magazine living in Dubai, UAE. There is some excellent advice that I get from your magazine. For example, the *30 Days With* section. I would like to subscribe to your magazine, but you have no international subscription offers. I buy it in Dubai for 23 Dirhams, which is approximately Rs 230. I missed the issue with the past issues and *Fast Tracks*. Is there a way I can get it? Again, I thank you for making such an excellent magazine.

Miqdad Raza Bhurani
Dubai, United Arab Emirates

Unfortunately we have no subscription service for outside India, but we are working on that. Licenses and permits to do so take time, but we will make sure to inform you if we do start such a service. We also cannot send you our anniversary issue, but you should keep an eye open for the December 2008 issue, which should contain all the past issues of *Digit* and *Fast Track*.

Team *Digit*

Suggestions Galore

These days, almost all techies have a broadband connection at home, and are running their own blogs or sites. Please give us more things about the Internet, tutorials about WordPress, maintaining a server (basics), etc. Also, please conduct contests in your Web site and publish the winners in the magazine—this would encourage more people to use your site properly, and increase interactivity.

Also, include more of programming tips and some sample programs to teach some of the concepts. Dedicate a section of the magazine to test our knowledge on analytical abilities, logical reasoning, etc. Give us the answers of those questions at the end of the magazine to correct us.

Please don't stop the *Take a Crack* Section! Also, give us some discounts every month on some hot gadgets. What I like most in every *Digit* issue is its well structured index page. It really saves me a lot of time, because I want to try to avoid games, as far as possible.

Lots of advertisements... thats great. This shows that you're number one. I know the value of Advertisements, as I am a blogger. I also like the concept of bundling separate booklets of advertisements. *Digit* has taught me to write in an unbiased fashion. I have also started concentrating on quality of articles instead of advertisers, and this has increased the value of my blog.

Where I stay, at first, only one stall sold *Digit*. A few years later, every stall sold it, but now in 2008, not a single stall in my area sells it. This is because everyone in my area has already subscribed!

When I was in class 12, my teachers used to ask me how I knew so much about hardware and the latest technology, and all I would say is "*Digit* magazine." Now I am in my final year BCA, and I hear that all those teachers have subscribed to *Digit* and are recommending that their students to subscribe too.

I have only one problem with your subscription model, the late delivery of the issues! I wish greater success to *Digit* in the coming years. Thanks to all the members of *Digit* for the great work.

Satish

That's a lot of suggestions! Give us a few months to be able to implement some of them. We haven't stopped the *Take A Crack* section, we've just put it on hold for a bit to see if we can improve it. However, judging by reader responses like yours, it's probably best to re-instate it to its regular position from the next issue onwards, and we will. The Jumbo *Fast Tracks* were a one off for the anniversary issue, and as you will see the regular *Fast Track* is back, but with one major change—it's colour from now on. Our apologies for the tardiness of the delivery.

Team Digit

Update Often

This is my first e-mail to you and I just wanted to let you know that it's a hell of a job that you guys are doing. *Digit*'s 7th anniversary issue was terrific, and I was really impressed by the *Fast Tracks* paper quality, and also the contents of the two DVDs. The 'Seven Wonders' story was brilliant, and I'm waiting for your Tenth Anniversary—make it the "The Ten Tech-mandments". Anyway the test for the LCDs in the previous issue really helped me choose one. I've been clinging to *Digit* for three years now, and you guys never seem to get old, except for some of the software on the DVD—I think it would be a treat if you could provide us with free versions rather than the monthly dose of Avast, the same old VLC player... just a suggestion though. Since I'm more interested in the DVD and CD, I'd be more than glad if you could provide some mobile software in the next issue. Apart from that, the rest is just perfect. Thank you once again Digit, you're my Tech Bible!

Meren Ozukum
Nagaland

If you're referring to the Essentials section in the CD, it's there because we have found that most of us end up formatting and re-installing quite often, and there are a specific list of software that we all need immediately afterwards. The essentials list is software that *Digit* feels every Windows user should have installed, and this is why it repeats on the CD with the latest versions every month. As for the rest of the disc contents, we will try and give you everything you have asked for in the coming months.

Team *Digit*

Thanks!

I have been reading *Digit* for the past 4 years and it's getting better and better. I want to inform you that I have got admission in BCA this month with 298 rank, and I give all the credit to you guys. Another thing is that some reader has written you a letter accusing you for not taking honest tests. I would like to inform him that I have been buying products only based on *Digit*'s recommendations. I trust you guys blindly, and everything I have bought based on your advice has really worked great.

I have one complaint: although this month's *Digit* was great and the *Jumbo Fast Tracks* even better, the DVD content was not that great. Like previous years, I was expecting a blockbuster movie or big free games. Also, Vista's Service Pack 1 was corrupted. When I installed it, after 4 hours it threw up and error. When I tried to copy it, it gave me a "cyclic redundancy error". I can't even download it because my connection is slow.

Akash Yadav

Congratulations! We're glad that we were able to inspire you to get into the tech field, and wish you all the best for your future.

If you got a CRC error while copying contents from the DVD, please write to help@thinkdigit.com, provide your name, address and telephone number, state your problem and we'll send you a replacement.

As for the movie, we tried to get one, but the costs associated with it were way too high. We're still going to try and get you guys some blockbusters, as and when we can.

Team *Digit*

More Q&A Please

I have been a regular "Digitian" for two years, and this my first letter to you. The June edition was simply great, it was like a bombshell. The software in the DVDs was great. The idea of splitting the *Fast Track* was better than splitting the magazine like you did earlier. I wonder how you guys guess what the reader wants? The articles were very nice and informative as usual...

But I really missed the Q&A section and the regular contests. I know you guys tried to fulfil that need by giving the iPod giveaway contest and the *Fast Track* contests, and even the prizes were far better than those of regular issues, but I love the format of old contests as they tested our knowledge, rather than our luck. And I would especially like to congratulate the designers on their tremendous work in making Digit so beautiful... My suggestion to you is to improve the prizes of contests of your regular issues by providing tech products and subscriptions.

All in all, your magazine is the best... keep up the great work.

Anirudh Khanna

As you have probably realised after buying this month's issue, the reason we didn't do the Q&A section last month and this month was because we were busy creating a Fast Track to Troubleshooting Your PC II, which is basically a very large collection of Q&A. Hope you're happy with that!

Team *Digit*

Where Are The Cell Phones?

Although my exams are on, I still can't part with my *Digit*! It's got everything a tech-hungry person like me wants. The best part of the magazine is the Tips & Tricks, and the A-list sections. Agent001 always does a praiseworthy job, and his articles are my favourite.

The first issue that I read had extensive reviews of the latest cell phones, but there's been nothing since.

That is all, keep up the excellent work! Cheers Digit!

Ankush Gupta
New Delhi

Keep an eye out for the August 2008 issue (next month) if you like cell phone reviews!

Team *Digit*

LETTER OF THE MONTH

Seven Up

So its "seven up" for you guys, and what a welcome! Congrats fellas. We swear by you even from this remote part of the nation (Nagaland). For a guy, who until three years ago used only MS Paint on the PC, it's impossible to describe what *Digit* has done for me. Of course, I still have some complaints.

When I say "remote part of nation," I say that because I celebrated your seventh anniversary two weeks into this month, and it spoiled the fun. In another "marginally" minor issue, I hated the coloured margins on every page. I loved the new font spacing which was much better than the last anniversary issue—which was really cramped and unsorted.

I still feel that the magazine lacks the slick feel of another international magazine that is available. That magazine presents the articles in a glossy iPhone-ish way, and dumbs down the content. *Digit*, however, feels plain (yet it is the most info-taining). For example, *PC World* (although a magazine for blondes) is visually more appealing, and some of and my 'tech savvy' pals buy it for that—I really pity them.

No magazine reviews products as unbiasedly and comprehensively as *Digit*. About your DVD, I'd say that its really confusing to have software divided between two dics (CD and DVD). Also your essentials section should include anti-virus updates. I would suggest that you convert the CD into an "Updates" disc.

Can you organise a contest where the winner gets to go to the famous "Lamington Road" with Agent001? What I'd give to go there and see for myself all the "best buys" (if not buy them).

The *Tech Career* articles are very helpful in creating awareness about alternate and lesser known career options. Your writers are certainly amongst the best and create the perfect blend of knowledge and fun. Even my severely tech illiterate sister Chinki loves to read articles by Nimish and Raaabo, and of course *Digit Diary* and *Tabloid Tech*. It was a pleasant change to see proper buying guides this time—unlike previous anniversaries, this time there were full blown reviews! I wish you luck for seventy more years!

Bhupati Baboo
Nagaland

Tabloid TECH

People And Events That Grabbed The Headlines—For Better Or For Worse

A Besotted Car!



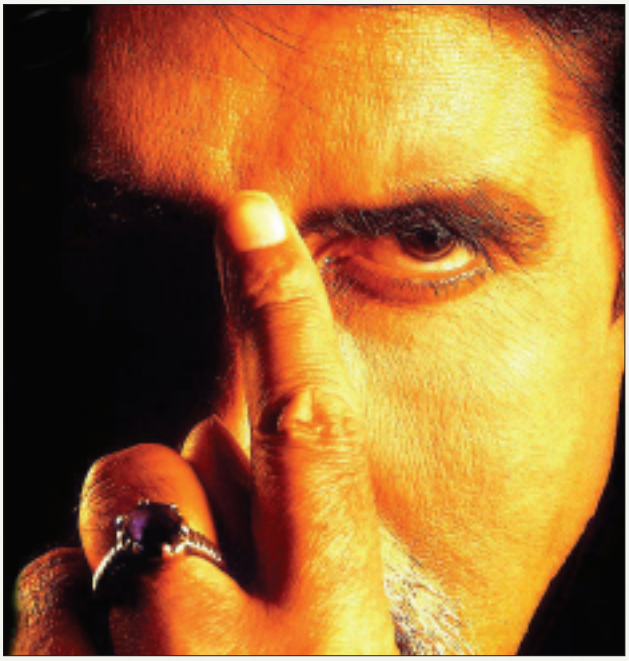
Eco friendly technologies seem to be catching on, and the royal family has caught the bug. It wasn't long before Prince Charles realised that there were a number of bottles of wine lying in his chalet for ages, and could perhaps be put to better use. How many bottles could the Prince go through anyway?

He hit upon the novel idea of using the wine as a fuel to power his 38-year-old Aston Martin. The car was a 21st birthday present from Queen Elizabeth, and the prince has converted it to run on 100 per cent bio-ethanol, as a way to reduce his carbon emissions.

The biofuels are converted and provided by Green Fuels Limited, a British company that previously provided biodiesel to power the royal train. The wine used for the bioethanol comes from a current vintage that remains after English wine producers reach the EU limit for annual wine production.

The prince has also converted his other cars—several Jaguars, an Audi and a Range Rover—to run on 100 per cent biodiesel fuel made from used cooking oil. Now that's an ecological commitment!

Moblogger!



Even the illiterate is now e-literate! So, why should celebs not take a stab at the www? Celeb blogging is the rage, and these blogs are keenly followed by mass media, because anything is "Breaking News" these days. Aamir, SRK and the Big B have been in the blogging circuit for a while now, and receive thousands of page hits daily.

Well, however difficult it may seem to keep their blogs updated, they manage to do so with some scuffle with their schedules. Now it has become a bit easier, at least for the Big B. After hosting his blog site, BigAdda.com has now introduced Micro blogging exclusively for AB.

Siddharth Roy, the CEO of BigAdda.com said that this new platform will offer a quicker and more convenient way to blog, and will help the superstar stay connected with his fans, 24/7, despite his hectic schedule.

The Big B's first post from his phone was on June 13, and it was just four words long: "Hello I am back". Subsequently, he has been blogging extensively-sometimes four times a day.

"Finished rehearsals. Driving back," said one post. "Dinesh Karthik drops in on set to meet me. The other day (Vinod) Kambli and Nikhil Chopra came over. They and other cricket stars shoot next door. A delight to see them," said another.

There is, however, a word constraint, with posts only as long as an SMS. Not a bad thing that... the word constraint, we mean.

Hair Loss, Somebody's Gain



Even supermodels lose hair! Before all you women out there start sniggering and pointing fingers, we should tell you that the hair was fake.

Moss was in Berlin to promote her perfume Velvet Hour, and whilst ducking to escape paparazzi, she lost her hair extension. Photographer John Farr picked it up and posted it on eBay. He isn't keeping the money, so all you anti-paparazzi KKK-lookalikes put down those torches and listen up: the proceeds go to the German anti-drug charity Keine Macht den Drogen. However, the auction has only 9 bids, with 56 Euros being the highest we saw. It's hard to tell who is most peeved by this: the charity: at all you miserly Germans smoking pot instead of bidding; Farr: for looking like a fool, making a big deal out of something and raising a whopping 56 Euros! Or is it Kate Moss? Who will probably never sleep again, paranoid that the world is forgetting about her. "56 Euros? Seriously? That's all I'm worth?"